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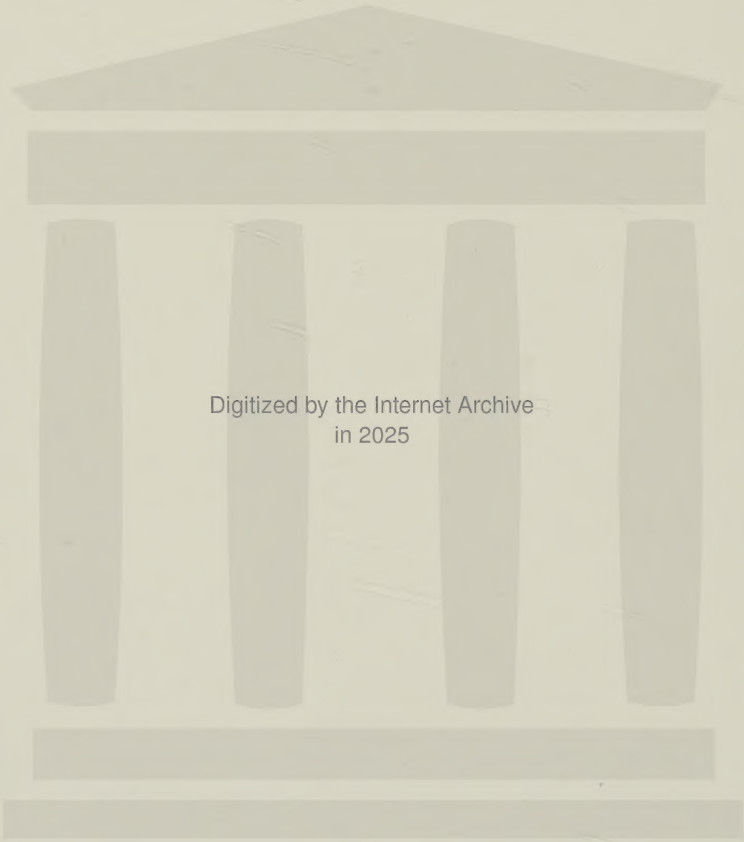

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Administration and conflict management in Japanese coastal fisheries

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Osaka, Japan

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PREPARATION OF THIS DOCUMENT

This document was prepared as part of a series of Technical Papers dealing with the Practices of Fisheries Management. It provides an important example to an approach to management through the provision of management authority to community fishermen groups.

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ABSTRACT

Japanese coastal fishermen have legally-guaranteed equitable access to and "ownership" of the living aquatic resources of coastal waters, through an elaborate fisheries rights system. In Japan no conceptual distinction exists between land holdings and land tenure and sea holdings, or sea tenure, and fisheries enjoy a legal status equal to that of land ownership. Sea tenure in Japanese coastal fisheries is a complex subject that is little known in the West. It involves time-honoured customary procedures for management and conflict resolution which have been incorporated into modern legislation.

The Introduction reviews selected aspects of the general behavioural context within which the administration of Japanese fisheries and the resolution of conflicts should be viewed. Since the degree of continuity with traditional management practises is an outstanding characteristic, Chapter 1 describes and provides examples of the historical antecedents of the present situation. Present day formal administration is described in Chapter 2.

Systems of coastal sea tenure reflect an intimate interplay of formal government regulations and informal customary elements. The latter are commonly of greater day-to-day importance than the former. In Chapters 3 and 4 this is examined through the problems of conflict management and resolution, proceeding from the personal and small-scale level to the impersonal prefectural and national levels. In Japan the most frequent, effective and culturally legitimate methods employed to manage and resolve conflict are informal and personal. These are operationalized via small-group discussion, verbal communication and the use of go-betweens. Such mechanisms, which ensure that a conflict remains localized and centred directly on the contending parties, are employed not only to manage conflicts between fishermen but also in highly formal situations such as arise in the judicial process. Failure to adhere to such a process invariably means that conflict becomes entrenched and impossible to solve.

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INTRODUCTION

Japan is renowned as the world's leading marine fishing nation and for its large and modern distant water fleet that ranges worldwide. Yet the mainstay of its fishing industry are the offshore and coastal operations that, with an annual catch of 10 million tons, now account for almost 90 percent of the nation's fish production and employ 94 percent of its over 200,000 fishing establishments.

Further, although coastal fisheries are responsible for only 26.4 percent of Japan's total fisheries production, in terms of value they yield 41.2 percent of the total, owing to a concentration on the capture and culture of high value species. The offshore fisheries, on the other hand, although producing 53.3 percent of the total catch contribute only 30.4 percent of the total value, since the offshore and distant water fisheries focus mostly on species of low economic value. In fact, the six species that together constitute the main catch of these fisheries, Alaska pollack, mackerel, sardine, squid, skipjack and tuna, are, with the exception of the latter, all low value fish. Together they comprise 63 percent of the total Japanese catch, of which 30 percent is accounted for by sardine alone.

The marine fisheries of Japan are divisible into coastal, offshore and distant water components. These distinct fisheries have never been legally defined, however, since legislation for the fisheries sector has been enacted for all three combined. But through the licensing system they have, in effect, been administered and managed as distinct components. Nevertheless, an operational distinction can be made. The distant water fishery is that which operates beyond the Japanese EEZ and in those of other nations; the offshore fishery, usually employing boats larger than 10 gross tons, operates seawards of the coastal fishery but still within the Japanese EEZ; and the coastal fishery, for the most part using boats of less than 10 gross tons, and which includes mariculture, operates landwards of the offshore fishery. This study is concerned only with the coastal fishery.

The small-scale fisheries policies of most countries are in various stages of chaos over the issue of private versus public rights. In most industrialized nations a whelter of recent regulations, such as catch quotas and limited entry, have been imposed, principally for the purpose of stock conservation; whereas in many developing countries unmodified legislation, in large

part inherited from colonial administrations, exists in theory but is hardly ever put into practise. Conflicts between traditional, small-scale fishermen and modern, large-scale operators are rife and have usually been resolved in favour of the latter. In developing nations this has led in large part to the disinheritance and impoverishment of traditional fishing communities.

By contrast in Japan, through a fisheries rights system, small-scale fishermen have legally-guaranteed equitable access to, and "ownership" of the living aquatic resources in coastal waters. No conceptual distinctions exist between land holdings, or land tenure, and sea holdings, or sea tenure. And as is unambiguously set forth in the Civil Code, fisheries enjoy a legal status equal to that of land ownership.

According to the Fisheries Law of 1949, fisheries rights to a sea area under the jurisdiction of a Fisheries Cooperative Association (FCA) are the bona fide personal property of the individual members of the Association, to whom they are distributed by the Association. Each Association establishes regulations for the control and operation of various types of fishery in an equitable, efficient and sustained manner, as local conditions dictate. This situation had its origins in both village customary law and in the formal legislation of the Japanese feudal era, although the full play of democratic processes and equitable treatment had to await the sweeping institutional reforms that followed World War II.

Sea tenure in Japanese coastal fisheries is a complex subject that is little known in the West. It involves time-honoured customary procedures that have gradually been incorporated into modern legislation, after appropriate modification.

An understanding of the operation of the present day system of sea tenure in Japanese inshore waters thus requires a good grasp of its historical context, since the degree of continuity of traditional management practises is an outstanding characteristic. Chapter 1 is therefore devoted to describing and providing detailed examples of the historical antecedents of the present day situation. The present day formal administration of coastal fisheries in Japan is described in Chapter 2.

Further, and certainly not unique to Japan, is that systems of sea tenure, at least those governing coastal waters, are far from being mere formal systems, institutionalized at the various levels of government. Rather, they consist, inter alia, of the intimate interplay of community rules of conduct, local social sanctions and the interpersonal behaviour of fishermen together with the formal institutions, that in the Japanese case range from the village FCA to the Ministry of Agriculture, Forestry and Fisheries. Those less formal, but nevertheless binding rules of conduct among small-scale fishermen are, in general, not well understood for most parts of the world. This is a serious "sociological knowledge gap" that severely constrains the design and implementation of viable systems of sea tenure.

The manner in which linkages are effected and maintained from the individual fisherman through to the national government varies considerably among cultures, and is, of course, deeply embedded within the behavioural norms of each specific society. In the Japanese case, at all levels, they involve much face-to-face contact and prolonged discussion, and they appear to be governed less by the rule of relatively inflexible law to which most Westerners are accustomed. These factors must also be well understood in order to comprehend the way in which inshore water sea tenure operates in Japan. They are discussed at length, with particular reference to the problems of conflict management and resolution.

Understanding the processes governing the behaviour of Japanese coastal fishermen, the mechanisms by which order is maintained within fishing communities and how disputes are settled and conflicts resolved by both formal and informal channels, requires a basic knowledge of some of the ways in which competition arises among fishermen and how conflict resolution takes place both within fishing and other small communities as well as in Japanese society in general. Although now something of a cliche, it is important to realize that such important values as harmony together with community or group orientation still strongly influence Japanese social behaviour. This traditionally has resulted in something quite different from the many litigous and individual-oriented Western societies. However, concomitant with the massive changes that have occurred in Japanese society since 1945 many of the traditional norms of Japanese fishermens' behaviour have broken down and litigation has become an increasingly common, if not still totally acceptable, means of settling disputes.

Traditionally, collective unity for the attainment of group goals was predominant in both moral philosophy as well as in practise. This had been reinforced during the long feudal era, when Confucian values and a national ideology put down deep roots in a Japan that was firmly closed to outside influences. That solid tradition was utilized by the Meiji government after the Restoration of 1868, when self-sacrifice and devotion to the modernization of the country formed an integral part of an explicitly stated national development policy.

Those ideals were severely strained by Western values that challenged Japanese society as a whole during its modernization, but they were tenaciously retained at the interpersonal level. Militarism and war restored them to the national level for a decade from the mid-1930s. Whereas defeat and occupation together with chaotic conditions and the rapid restoration of society and the economy during the two decades after 1945 shattered those ideals at the national level, it reinforced them at the village, small group and small organization level. There, interpersonal relationships remained close knit and were a vital source of psychological and economic support during some twenty years of rapid change. Indeed, to the present, these traditional cultural values continue to remain important at the lower social levels,

where the concepts of harmony and conflict avoidance remain idealized norms.

But too much can be made of this ideal value of harmony and all that it entails. Social harmony and collective unity based on consensual decision-making and hierarchically-ordered interpersonal relationships has been one of the major themes emphasized in most post-war social science research conducted in Japan by foreigners. The fallacy of this widespread external perception of Japanese society has not, in general, been exposed by either Japanese social scientists or by the informants who have worked with foreign researchers (Smith, 1978). In large part this stems from the understandable desire to portray one's nation in the best light and from the common practise, even by Japanese interacting among themselves, of "putting a lid on smelly things."

However, to anybody familiar with the recurrent peasant uprisings throughout Japanese history and with the history of the nation since the Meiji Restoration, the shortcomings of the "harmony" model are readily apparent. While undeniably harmony and related qualities are a major force in Japanese society, Japan has, as it still continues to do, experienced periods of tremendous internal conflict. Indeed, no less should be expected given the furious rate of change that has occurred in the nation over the last 120 years. And much of that change has both stemmed from and led to conflict. This is demonstrated in Chapter 4 for intra-sectoral conflict stemming from administrative and technological changes in fisheries, and with respect to inter-sectoral conflicts involving environmental pollution and fisheries.

In brief, the "harmony model" of Japanese society, which has recently been refined in a spate of highly influential publications, such as those by Nakane (1970), Kaplan (1972) and Vogel (1979), needs balancing and integrating with a "conflict model", as several studies have revealed (e.g., Packard, 1966; Tsurutani, 1977; Steiner et al. [eds.], 1980; McKean, 1981; Krauss et al. [eds.], 1984), lest the gap between theory and empirical research widen yet further.

In reality, harmony and conflict go hand-in-hand in Japan, as undoubtedly they do in most if not all other societies. Harmony is a cultural ideal, a value that often cannot be, or is not, put into practise. Harmonious relationships are more obvious in comparatively static societies, such as small groups within relatively isolated, traditional village communities that have been less exposed to the tumultuous forces of change. In such communities the ideal of harmony remains strong at the interpersonal or private level, where conflict or confrontation is often sensitively anticipated, contained and managed. But even in such tight-knit communities although interpersonal conflict might not be expressed openly, antagonisms are nevertheless communicated (Lebra, 1984) or subconciously displaced (Yoshida, 1984).

On the other hand, more conflict than harmony is often apparent at higher and public levels in Japanese society. This is

not uncommon in inter-village relationships among smaller villages, among groups within larger communities and within large and complex institutions, between different economic sectors, between and among prefectures, and between, say, the fishing village and the prefecture and between prefectural and national level organizations. Such inter-level, or inter-institution at the same level, conflict is particularly common owing to ideological polarization, political tension, resource use incompatibilities and differential access to resources. It is also more common in the more complex and dynamic higher-order elements of society than at the simpler and relatively static lower levels. This not uncommon occurrence of conflict at the higher levels has often been obscured by the tendency of earlier scholars, particularly the anthropologists among them, to generalize from their findings in small groups to Japanese society as a whole.

Thus an understanding of small-group solidarity and the maintenance of harmony and equity within the group is fundamental. A small-scale fisherman usually belongs to a number of social groups whose membership overlaps (e.g., kin, age-grade, specialized fishing, drinking, shrine maintenance, and the like) and must be sensitive towards the feelings of other group members, particularly with regard to their feelings about him. This demands the suppression of disruptive, egocentric behaviour -- although not inhibiting individual achievement -- and requires a sense of the various levels of social boundaries that serve to delimit other social groups. Coupled with group orientation is the abhorrence of isolation and the extreme psychological trauma suffered by members pushed out of their group as a consequence of persistent anti-social behaviour.

The importance of the small-social group should not be underrated, since whereas in practical matters on the sea one can disregard the regulations of the larger society (non-group) without incurring severe social sanctions, the flouting of the local community's (group) customary rules of behaviour is hazardous to one's position within the community. Thus violaters of the law are punished by the authorities if caught, but unless local customary rules are also broken the community response is generally one of unvoiced sympathy rather than blame, accompanied by an admonition to be more careful about obeying the law in future.

Nevertheless, despite the seemingly many constraints, Japanese society provides ample scope for individuality, although clearly not egocentric individualism. With this is linked the notion of pride, often veiled by humbleness, in doing a craftsmanlike job. Among Yaeyama fishermen, for example, the social recognition accorded the achievements of a successful fisherman, together with his more important social role, rather than a monetary rate of return, per se, is a great source of pride, not just for the individual fisherman alone, but for the entire community. But since his group is a constant source of emotional and other support, the successful fisherman must, in turn, be generous and tolerant towards other members.

Of course, such basic social forces impinging on an individual fisherman do not act in isolation. Rather they function as overlapping and interlocking sets that affect all decisions about fishing behaviour and fisheries problems with potential social significance.

Another main force in contemporary Japanese society is the concept of egalitarianism together with adherence to the principles of democracy and the notion that nobody must be deprived of the right to make a living. The concept of egalitarianism is deeply ingrained in Japanese contemporary social behaviour and is upheld by the law, which in the fisheries sector, for example, ensures equitable access within the fishing community to marine resources of the fishing rights area. But such principles do not inhibit personal advancement through dint of hard work, and, perhaps paradoxically, were it not for other principles elaborated below, educational and occupational elitism abounds. In turn this is controlled by such "levelling mechanisms" as death duties and property and inheritence taxes which guarantee that the relatively wealthy are "... reduced again to the middle class after three generations." On a more short-term basis peer and similar pressures serve effectively to control excessive selfishness, pride and exhibitionism.

Since the law promotes and upholds egalitarian principles, obedience of the law is another dominant feature of modern Japanese society. Yet this, too, is tempered by other factors, such that whereas the spirit of the law is closely observed practise may differ according to particular circumstances. Among these tempering factors is a strong aversion to absolutism and contractualism, and a sense that everything is situationally relative. Thus in settling disputes a middle way is invariably sought to balance contending interests and claims.

In chapters 3-4 the problems of conflict management and resolution are discussed, proceeding from the personal and small-scale level to the impersonal prefectural and national levels. In Japan the most frequent, effective and culturally legitimate methods employed to manage and resolve conflict are informal and personal. These are operationalized via small-group discussion, verbal communication and the use of go-betweens. Such mechanisms, which ensure that a conflict remains localized and centred directly on the contending parties, are employed not only to manage conflicts that arise between two fishermen, but also in highly formal situations such as arise in the judicial process, for example.

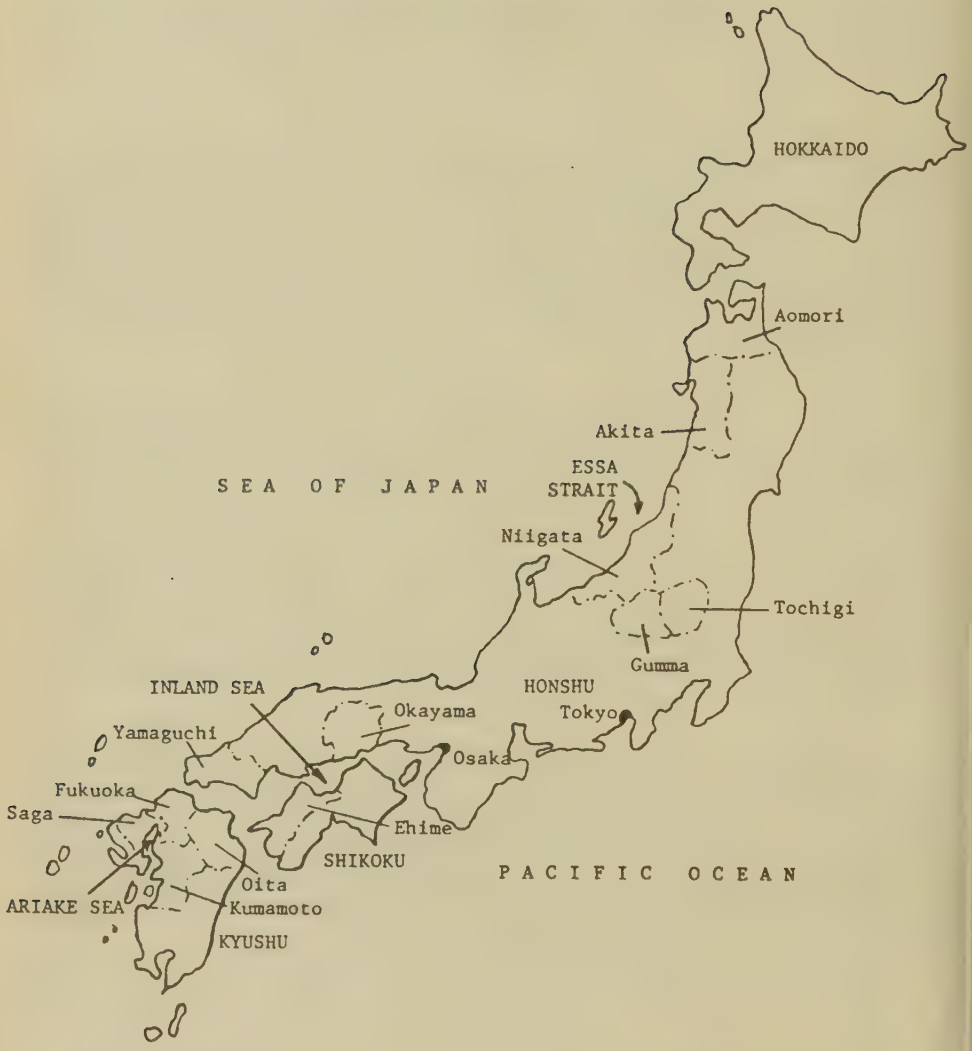
As is discussed in chapter 3, using the example of fishermen in the Yaeyama archipelago of southwestern Okinawa Prefecture, many traditional techniques of territorial behaviour by individual fishing units function to provide an equitable access to resources and to reduce interpersonal conflict. They are reinforced by two explicit techniques for minimizing conflict, avoidance behaviour and the priority rights of a first-comer to work a given fishing spot. Despite such techniques that serve to antici-

pate sources of conflict, disputes nevertheless do arise. These are generally amenable to resolution through interpersonal techniques, with an acknowledged expert fisherman generally acting as a go-between, reinforced by peer group pressure and various sanctions, the ultimate among which is social ostracization.

The pesistent breaking of customary rules that involve financial loss to a victim are mediated by a more formal yet still informal means, and are settled by both symbolic acts that demonstrate the shame of the guilty party plus the payment of monetary compensation to the victim. When informal community mechanisms are inadequate for solving a particular conflict, especially one having broad implications for access to resources, the Executive Committee of the FCA will formulate a solution which it presents to the Annual General Meeting for ratification. Nevertheless, even in this latter process considerable personal interaction is involved in mediating an acceptable solution.

Similarly, for problems that require formal solution at higher levels personal interaction and other traditional techniques form an important and integral part of the resolution process, which involves protracted and open discussion, mediation and compromise designed to reach a mutually acceptable consensus. Failure to adhere to such a process invariably means that conflicts become entrenched and impossible to solve. In chapter 4 the formal resolution of conflicts at the local, inter-prefectural and inter-sectoral levels is examined, as is the use of compensation payments in solving them. To illustrate the variety and complexity of inter-prefectural fisheries conflicts, and to outline some of the techniques typically employed in their settlement, three of the so-called "Seven Greatest Fisheries Incidents in Japan" are described.

The recent evolution of legal safeguards for coastal fisheries was enmeshed in the evolution of Japanese environmental legislation. Despite modernization of the processes involved, one of the outstanding characteristics of the history of post-war conflict management and resolution involving coastal fisheries has been the persistence of the traditional techniques and mechanisms of mediation and compromise to achieve settlement, as well as a devolution from higher to lower administrative levels. Therein lies an abiding strength.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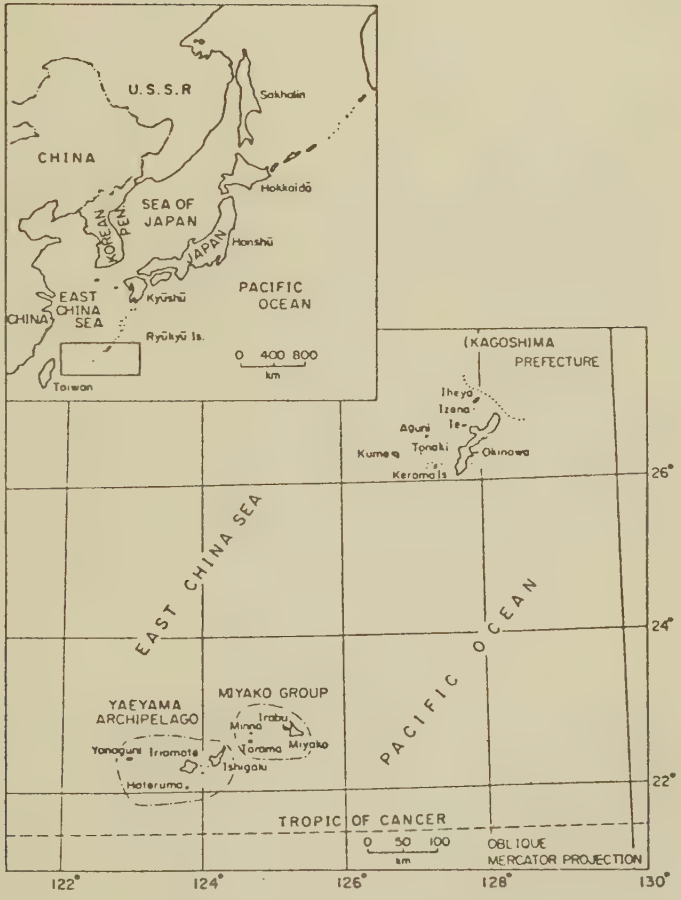

Figure 1. Location of Okinawa Prefecture

CHAPTER 1: HISTORICAL ANTECEDENTS

The complex and bureaucratic formal system of modern Japanese fisheries management and sea tenure evolved during the twentieth century. But it has a long historical legacy, with its codification clearly embedded in the early-Feudal Era (1603-1867 A.D.). Formalization of systems of sea tenure by the feudal or Edo government must have been based on precedents in customary usage, particularly the manorial system, although this can only be inferred.

For convenience this section has been divided into three periods. They embrace widely differing timespans, and the data available for each are also grossly uneven. The first I have called the "pre-feudal period" (pre-1603 A.D.), the second is the commonly accepted feudal or Edo Period (1603-1867 A.D.), and the third I have designated, given its many continuities with that immediately preceding, the "post-feudal period" (1868-1949). Apart from the second period, these do not conform with any commonly accepted practises of Japanese historiography.

PRE-FEUDAL TIMES

Abundant and diverse shellmounds, particularly around Tokyo Bay, demonstrate that by the Middle and Late Phases of the Jomon Period (4,500-2,000 years ago) permanent fishing and shellfish-gathering settlements were established, at least on the Pacific coast of Eastern Japan, and that they were specialized according to whether they exploited the aquatic resources of fresh-, brackish- or shallow, inshore marine waters. Such specialization according to resource habitat, together with a fairly regular distribution of shellmounds at approximately 2 km intervals along former coastlines (Akazawa, 1981; Oikawa and Koyama,1981), may demonstrate territoriality with respect to aquatic resource use. Inceasingly specialized and larger-scale fisheries are revealed by the shellmounds of the ensuing Yayoi Period (2,000-1,500 years ago), with particular emphasis on abalone (Haliotis sp.) collection (Koyama, 1969).

Further inferences can be made from information contained in the Account of Three Kingdoms (San Kuo Chih), an official Chinese document compiled before 297 A.D., that in the section dealing

with the Wei Dynasty (Wei Chih) mentions abalone as being a tribute item sent from Japan to China. Many marine resources were important as tribute or tax items in early Japan, including salt, various seaweeds, salmon and many species of small fish, in addition to abalone, as is confirmed by numerous mokkan (lit. "wooden tablets"), which may have been tribute or tax lists, excavated at the eighth-century palaces at Nara and Asuka (Koyama, 1969).

It is not difficult to imagine, then, that in parts of Japan some form of management must have been applied to the exploitation of marine species, at least in specific habitats, starting about two millenia ago. Since once a particular item is specified for tax, revenue or tribute purposes, measures must be taken to secure a continuous and stable supply.

More concrete evidence is supplied for the Kansai Region of Western Japan, the cultural heartland of early Japan, by official documents pertaining to Lake Biwa (Kada, 1984). Although the largest lake in Japan, Lake Biwa has always been regarded administratively as a ko-umi (lit. "small sea"). Ninth-century documents concerning fishing on Lake Biwa reveal that an unidentified emperor awarded the exclusive rights to a particular community to establish fishing weirs where the Seta River enters the lake, in return for an offering of fish or money. Similarly, during the Nara and Heian periods (7th-12th centuries), various emperors granted rights to exploit fishing grounds at points where several specified rivers either flow into or out of the lake. As the manorial system of administration became widespread in the region emperors ceased to grant exclusive fisheries rights. Instead such authorization became the prerogative of powerful shrines, and in return the shrines received a share of the catch.

Kada's research on Lake Biwa fishing communities also provides a vivid illustration of the continuity of these ancient fisheries traditions, and the manner in which centuries-old rights still stongly influence present-day activities. One particular village was granted set gear rights in 1098 A.D., by the Kamigamo Shrine, in Kyoto. During these 900 years the fishing territory of that village has not changed, and has been conserved over the centuries by the strict access rules (vide infra).

Those earliest documents relate only to rights for fisheries using set gear. Mention of the exclusive right to offshore fisheries using hook-and-line and netting techniques appear considerably later, in documents from the 13-16th centuries. Further, although commoners are also known to have had rights to fisheries during those early times (this is known through one document that mentions a conflict between the owner of private gear and one with exclusive rights given by a shrine), there is no known document pertaining to the fisheries tenurial situation of the lower classes.

During the century before the beginning of the feudal era major political leaders, such as the Ashikaga Shogunate and Oda

Nobunaga, became the patrons of fisheries rights holders. During this period exclusive offshore fisheries rights were granted to particular privileged communities by such leaders in return for the provision of warships, sailors and warriors in lieu of the previously offered fish or money.

EVOLUTION OF SEA TENURE DURING THE FEUDAL ERA

During the feudal era, or Edo Period (1603-1867 A.D.), all sectors of Japanese society were strictly controlled and carefully organized according to a rigidly hierarchical system. Most of the country was divided into large fiefdoms (han), many the forerunners of present day prefectures, each of which was privately owned, in effect, by a regional lord. Apart from the han and areas reserved directly for the central government (tenryo) only a few agriculturally unproductive mountainous areas remained in the public domain, for common use. A nationwide cadastral survey was conducted prior to 1610 by the central government of Toyotomi Hideyoshi, as well as by each fief government, to establish the economic productivity of each village and so to fix its taxable level. At that time village boundaries were clearly demarcated, based largely on customary usage, as were the sea boundaries of coastal villages (Hara, 1977), most probably also to facilitate tax collection.

Apart from areas with particularly productive fishing grounds, which provided an important source of tax revenues, most fief governments were little interested in fisheries (Yamaguchi, 1948). In the early decades of the feudal era, as the richer fishing grounds were assimilated into the fiefs, regulations were gradually introduced, especially for species with high economic value and those required for taxes and tribute (Ninohei, 1981). At the same time coastal villages were classified into two types, jikata,"farming villages," and urakata, "fishing villages," thereby defining their duties towards the ruling classes. In general, although not in all cases, farmers were prohibited from engaging in fisheries and were forced to concentrate on the production of rice, the all-important tax commodity, against which the value of other primary products was assessed.

Although there remains a wealth of primary historical sources dealing with Japanese coastal fisheries, none provides an exact date for the beginning of an institutionalized system of village or local sea tenure in Japan proper. However, it is generally assumed to have occurred sometime during the early part of the Edo Period (Yamaguchi, 1948), since during that time villages became increasingly specialized in particular types of coastal fishery and started to claim their own fishing grounds.

For present day Okinawa Prefecture, however, the information is more concrete (Akimichi and Ruddle, 1984). In the Ryukyu

Islands, according to ancient customary law, the generally acknowledged sea territory of each coastal village was simply a seaward extension of its terrestrial territory (magiri). In 1719 this became codified, at least as far as Okinawa Island and other main islands were concerned, when the government of Satsuma fief instructed each Okinawan village to proclaim and define its own sea territory, by the umi-ho-giri law (lit. " Sea Division Law"), regardless of whether or not fishing was an important economic activity in any particular settlement. From that time each coastal village legally retained the exclusive right to exploit the resources of its adjacent sea territory, as the common property of all its residents (Nakayoshi, 1915).

Concurrent with the instruction to villagers to "divide the sea" was the appointment by the Satsuma government of village officers (umiatai or umigamae) responsible for village marine affairs via the enforcement of government regulations. The principal intent of umi-ho-giri was not to regulate coastal fisheries per se, but rather the local level control of marine affairs and the provision of corvee labour, as is clearly revealed by the three main duties of the umiatai, which were: (1) to inspect the shoreline and to notify the village guard of "any objects drifted ashore;" (2) to protect and guide government vessels transiting a village sea territory; and (3) to supervise the villagers' fishery activities and to ensure that tribute goods were offered to the fief government and to the village lord, as specified (Nakayoshi, 1915). The performance of corvee and the confirmation of exclusive rights to an coastal sea territory went hand-in-hand, since in return for their labour villagers were confirmed in their exclusive fisheries rights to a particular territory.

Based on time-honoured customary laws, the 1719 law upheld a village's right to manage its adjacent coastal waters. This law also upheld the customary practise whereby outsiders could not work a village's sea territory unless an agreed fee was first paid to the umiatai of the village whose territory was to be fished. The boats and gear of fishermen from another village apprehended working illegally were confiscated and were returned only after a fine had been paid. Similarly, poachers of octopus or shellfish were fined and then returned to their own village. Further, only householders enjoyed free access rights to a village sea territory, whereas tenants had to pay an annual fee to exploit octopus and shellfish (Ryukyu Government, 1968). Another important customary right acknowledged by the 1719 law was that of the farmers of the largely infertile and impoverished Okinawan countryside to collect hondawara seaweed (Sargassum spp.) and sea urchin (Tripneustes gratilla) for use as fertilizer.

During the feudal era one characteristic of present day coastal fisheries was paramount -- and even at that time it must have been based on precedents in customary usage -- and that was the noteable lack of nationwide uniformity in the definition of coastal fisheries and their regulatory procedures. In other words, despite an increasingly centralized and bureaucratized government during the Edo Period, coastal fisheries had only a

local focus and were closely adapted to local physical, biological and socio-economic conditions, a dominant feature that persists to this day. This inevitably led to considerable variation throughout Japan in their organization and conduct.

(1) The Local Importance of Fisheries

The local importance of coastal fisheries varied considerably throughout Japan during the Edo Period, although, in general, compared with agriculture they commonly were of minor concern to most fiefs. Despite some fisheries generally being a particularly important source of revenue, in most instances marine products were recorded in local tax books as "miscellaneous items." From the mid-Edo Period, however, the central government took as a tax on the fiefs all the abalone, kelp, sharkfin and sea cucumber produced throughout Japan for export to China (Nose, 1980).

Where coastal fisheries were important to a fief's treasury, and particularly the highly capitalized, large-gear using fisheries, strict regulations were generally imposed on the number of entrants, via the licensing of gear. This was also done to conserve stocks and limit, via taxes, exploitation by outsiders. This is well illustrated by the regulations adopted by Uwajima fief, in southwestern Shikoku Island (Ruddle and Akimichi, n.d.), where the sardine fishery was a major source of revenue, and in the Fukuoka Domain of Kyushu (Kalland, 1984).

At the other extreme were conditions in parts of the Ryukyu Islands -- now Okinawa Prefecture -- such as in the Yaeyama archipelago. Historically, Yaeyama has been a poor, remote and neglected part of the Ryukyus, a situation that the islanders could not remedy by developing the rich fishery resources, since under the Ryukyuan monarchy the exploitation of marine fisheries was limited to the use of stone weirs (Ruddle and Akimichi, n.d.). That situation continued when the islands passed to the control of the Satsuma fief (based at Kagoshima, southwestern Kyushu), in 1609, since the Satsuma regarded fishing as a low caste activity, and entry to the sea was strictly forbidden. Thus marine resources were barely exploited, using only rudimentary techniques and for subsistence purposes (Kishaba, 1975). However, in other parts of the Ryukyus highly specialized fishing communities, such as at Itoman, on Okinawa Island, existed and strengthened their position throughout the feudal era (Akimichi and Ruddle, 1984; Ruddle and Akimichi, n.d.).

(2) Division into "Jikata" and "Urakata"

As noted above, Japanese villages were classified either as farming (jikata) or fishing (urakata) settlements. So strict was this classification that some coastal villages which formerly had a mixed economy were divided into two separate villages, one for the farmers and the other for the fishermen. Although most such distinctions were based on occupation, some settlements, such as Shingu, in Kyushu, were physically relocated to ensure a strict

separation of functions (Kalland,1981). But, as in Fukuoka, for example, the separation between fishing and farming villages was never complete. In that fief not all 39 urakata were fishing villages, since some that formerly had been were later principally engaged in shipping, and another had ceased fishing without being reclassified. Further, for reasons not elaborated, some farming villages were classified as fishing villages (Kalland, 1984).

Although the situation was not uniform throughout the country, the inhabitants of jikata were usually prohibited from claiming the right to engage in fisheries -- except for the collection of seaweed for use as fertilizer -- even though their village might front on the sea. In some fiefs only poor villagers were permitted to fish in nearshore waters. And in other settlements, where the economy was based on a mixture of agriculture and fisheries, only members of the lower caste were permitted to fish. In general only specialized fishermen resident in urakata were granted the hereditary right to exploit nearshore marine resources in the common waters of the village, on payment of a tax or tribute to the fief. In many instances fishermen could also fish in waters off agricultural villages.

(3) Boundaries of Sea Territories

The formation of village inshore sea territories did not occur either at the same time or at the same rate throughout Japan. In part this stemmed from the socio-political history of the regions and partly it was a consequence of such regionally varying factors as geographical circumstances, level of market development and the general economy (Arai, 1970).

As already mentioned, although village sea territories were formed largely during the feudal era their historical roots penetrated much deeper. The antecedent manors (shoen) had levied duties in labour and kind on their fishermen, in return for which the manor protected their territories against outsiders. This was reinforced when the manors developed into small fiefs during the Warring Period (1467-1568). Around Osaka Bay, where markets and the manorial system developed early, a village sea tenure system had evolved prior to the feudal era. But in more peripheral regions village sea tenure emerged later, since, according to Arai (1970), fisheries and fishing villages developed later and hence there was no pressing need to develop inter-village boundaries.

Usually, as the early-Edo Period codification established or reconfirmed, a particular local fishing ground belonged to a single village, but some were the shared property of several settlements. Generally, those old shared village territories correspond to present day common rights fishing grounds. Virtually without exception, the coastwise extent of such village sea territories was defined by the projection seawards of the terrestrial boundaries of the village, although the angle at which these boundaries were projected was sometimes a cause of friction between villages. In some instances conflict arose between vil-

lages that had formerly fished the same grounds but were henceforth limited to separate areas as a consequence of the artificial boundaries established by the feudal administrators. (This was a precursor of several incidents that followed the passage of the 1901 and 1949 fisheries laws [vide infra].) Such boundaries, which were often defined for administrative convenience rather than being based on customary usage, were particularly problematical, especially if men from one community were thereby excluded from areas formerly of vital importance to securing a livelihood, as in the case of exclusion of beach seine operators from critically important sandy beach areas (Kalland, 1984).

On the other hand whereas coastwise territories were precisely defined the seaward limit of a village's territory, i.e., the boundary between coastal and offshore fishing grounds, was not defined with precision nationwide, and the criteria for establishing it varied. This was perhaps a reflection of the importance of defining rights to sandy beaches in particular, which were critical to beach seine operations, whereas offshore areas were of lesser importance. In the Ryukyus, shallow water in which an adult could walk (naba, lit. "fishing ground") was reserved by the adjacent village for the exclusive use of its inhabitants. In most instances in the Ryukyus the area of the naba largely coincided with that of the reef flat. The deeper water beyond the coral reef could be used freely by all Ryukyuans living in an area wider than the adjacent village (Shimabukuro, 1971). In Japan proper various criteria were used in different places to define the seaward boundary. A fairly common criterion was the number of fishermen with access rights. This was often a cause of considerable variation in fixing the seaward boundaries. Along the relatively sparsely populated Sea of Japan coast of Honshu, for example, a large sea territory was available, and the seaward boundary of coastal fisheries was set at 20-30 Chinese li (some 12-18 km) from the coast. But around the densely populated Inland Sea, where demand for access was heavy, the boundary was set at only one Japanese li (3.92 km) from the high tide mark. In yet other cases no geographical boundaries were delimited, either along the coast or seawards.

(4) Shared Usage

In feudal Japan the concept of shared land (iriaichi) used jointly by several or more villages within a fief for the collection of fuelwood, thatching materials and the like, was widespread. This same concept was also extended to the sea territories, particularly in bays which would have been difficult to divide among villages, and fishing rights in fishing villages (Hara, 1977). Within the shared fishing territory (iriai) the use of a given technology or the harvest of a particular species was reserved for one village, whereas other species could be taken using different gear, regardless of where the fisherman lived, provided that his residence was in one of the settlements having rights to the shared fishing grounds, and particularly if it was a branch village founded by migrants from an older settlement.

The iriai concept applied to bays was controversial, particularly with regard to access to sandy beaches to which individual villages claimed exclusive rights. Many villages attempted to extend "their" areas at the expense of other communities. However, these claims to exclusive use rights within bays were seldom upheld by the authorities, who issued decrees to settle disputes, thereby undercutting the basic concepts of a shared fishing territory (Kalland, 1984). Fundamental to the iriai concept was that a particular sea space was to be held jointly and equally by two or more villages. However, in Fukuoka the practise of granting reciprocal access rights (vide supra) or access in return for payment (vide infra) was more widespread.

Under other circumstances the iriai concept was applied among the fishermen of a single village where a portion of the village sea territory would be licensed to a particular individual for a beach seine operation. The remainder of the area would be regarded as iriai for the free use of non-netting techniques.

The open sea beyond a village sea territory was also known as iriai. These waters could be worked by boats from any village along the coast of a fief. However, access was controlled since owners of these larger boats formed guilds, which were licensed by the fief in return for the payment of a tax, the performance of coast guarding duties and the transport of fief goods, on demand.

Prior to instituting reforms in coastal fisheries (vide infra), the Meiji government made an exhaustive search of feudal documents to establish the historical basis of sea tenure throughout Japan. This led to the government's postulation of a three-stage model for the development of village sea tenure during the feudal era (Hirasawa, 1979).

In the first stage, the privileged or "real" fishermen (i.e., full-time specialists) of an urakata village (Village A) could fish freely in the territories of neighbouring villages (B and C), which were jikata settlements whose inhabitants were prohibited from fishing. Later a need arose to regulate access when villages B and C claimed their own sea territories. However, since the inhabitants of A were still regarded, according to the implicit caste system, as "true fishermen" they retained limited exclusive rights within the territories of the adjacent villages, such as those to exploit benthos, for example, whereas the inhabitants of B and C henceforth held all other marine resource rights. The third stage was reached when each village decided to enforce exclusive rights to its own sea territory.

The processes postulated by that model appear to have developed gradually during the Edo Period, so that village sea tenure was widely established by the middle and later years of the period. At the very end of Japan's feudal age, just prior to the Meiji Restoration, in 1868, it appears that the second stage of the model was the dominant tenurial mode, that stage one was still common, and that the final stage was just beginning to

emerge in the most highly developed and productive fisheries. It was that final stage which was institutionalized by the Fisheries Law of 1901 (vide infra).

(5) Other Access Rights

Together with the provisions of the iriai system, the granting of other access rights functioned to make the bureaucratically rigid sea tenure system of the Edo Period more flexible. In that way it became better adapted to the heterogenous nature of different yet proximate fishing grounds by enabling fishermen to exploit a range of locations, to work year round and to specialize in particular fisheries.

A common reason for granting access rights to outsiders within an exclusive sea territory of a village was to afford fishermen from villages with small or resource-poor territories access to better fishing grounds (Kalland, 1984). Yet almost invariably restrictions were imposed on such fishermen. Most commonly this took the form of limitations on technology, boat and gear numbers, target species and seasonality and timing of operations. Further, fishermen granted access were required to pay a fee equivalent to 10-33 percent of the value of their catch taken in the waters to which they were given access. Since that was no small amount it may well be that the real motivation was to extract further rents than to provide more equitable access.

Access to sandy beaches located in exclusive rights territories was also commonly granted during the feudal era, since in beach seine operations these were critical sites for hauling and drying nets and for sun-drying fish. A fee was levied on those granted such access for net- and fish-drying (Fukuoka Prefecture 1963, cited in Kalland, 1984).

(6) Licensing

Although fishing villages were either given or confirmed in exclusive rights territories during the early-Edo Period, it did not imply that all inhabitants thereby acquired equal access to inshore waters, since not uncommonly the fishing grounds were monopolized by local elites in return for tax payments. Access to fishing grounds was limited by restrictions on the number of fishing units and boats and on the number and types of gear that could be employed (Arai, 1970; Ninohei, 1978; Yamaoka, 1974).

Little documentary information exists on either restrictions placed on households or boats permitted to fish during the Edo Period, as such strategies were probably adopted within villages to solve only local problems. On the other hand there is substantial information to show that gear, and large gear in particular, was restricted by licensing in some fiefs, as in Fukuoka and Uwajima.

In neither fief were licenses required to operate such

simple technologies as hook-and-line fishing, seaweed harvesting or shellfish gathering -- with the exception, among the latter, of the valuable abalone and turbo shells in Fukuoka (Kalland, 1984). Such fisheries appear to have been open to anybody who had access to a boat, gear and labour. Similarly, apart from being taxed, small nets, that included, inter alia, gill nets, set nets and fish traps, were apparently of little interest to fief authorities, although in Fukuoka local licenses issued by the village authorities were required for the operation of small net gears (Kalland, 1984).

But large, highly capitalized gear which yielded potentially major economic returns was strictly controlled and taxed by the fief authorities in both Fukuoka and Uwajima. In both fiefs the sardine catch using beach seines was the most important fishery during the Edo Period (Kalland, 1984; Ruddle and Akimichi, n.d.), hence the control of these large nets was of great interest to the authorities.

Large net fisheries were capital intensive and demanded a major investment in boats and gear as well as a large labour force. Thus in the main they were feasible only to a few rich village entrepreneurs, commonly merchants. To guarantee a viable rate of return on the large investment, such fisheries needed unobstructed access to relatively large tracts of sea space, and thus had to be allocated specific and exclusive territorial rights to fishing grounds (ajiro) within a village's exclusive rights area. This led to the "privatization of fishing grounds" in what was theoretically a communal sea space, since the large net owners gradually acquired prescriptive rights to the ajiro (Habara, 1954). Thus in Uwajima fief, for example, special licenses were issued to members of the shoya class to operate beach seine nets to catch sardines within the sea territory of each village. (This class was a hereditary village elite generally composed of rich farmers, wealthy fishermen or merchants.) The owner of a beach seine (ami moto) received a special ajiro (lit. "territory of the net") license from the lord, via the County Office Court, which gave him the exclusive rights to operate in a particular tract of sea, as well as the exclusive rights to use a stretch of the foreshore for hauling, drying and maintaining his net. Apart from that ami moto, which was hereditary, no other permanent fishery based on netting was permitted.

There existed, however, the concept of kogi ajiro (lit."official ajiro"), which was regarded by the fief authorities as a potential site for establishing an ami moto at some future time. Prior to awarding a permanent ami moto for such sites, other village fishermen, or those from other villages, could apply to the fief for a temporary license to operate a beach seine in the kogi ajiro. These temporary licenses were known as hyakusho ami (lit."common people's net" [i.e., "farmer's net"]), to distinguish them from the ami moto belonging to the higher status people (shoya). Gradually, in Uwajima, this dual licensing system led to an extreme overcrowding of the beach seine fishery, and eventually the commoners objected to the privileged position of

the ami moto holder. In response, in 1831, the fief cancelled all exising beach seine licenses and issued only one ajiro territory for an ami moto per village (Ruddle and Akimichi, n.d.).

(7) Other Regulations Imposed on Fishing

Strict regulations were drawn-up by the Uwajima fief to ensure the conservation of resources. The use of bottom gill nets for the benthos catch was prohibited, and fishing with a small mesh trawl net ("with a mesh like a mosquito net") was forbidden. Piscicides were not permitted and night fishing with torches was regulated by season and sometimes prohibited. Seaweed harvesting was also banned during the spawning season because the eggs of some species of fish attach to the weeds (Ehime Pref., 1938, 1962; Ishige, 1975). Similar regulations obtained in other fiefs, such as Fukuoka (Kalland, 1984).

(8) Conflict Resolution

It is noteworthy that both the causes of conflicts and the processes employed to resolve them within and among villages during the Edo Period differ little from those still mainly used at present (vide infra). This constitutes an important part of the continuity of tradition fundamental to an understanding of present day Japanese inshore fisheries.

Fisheries disputes that occurred within villages are relatively poorly documented since they were generally of little or no importance to the fief authorities. Among the more serious of intra-village disputes were those over licensing and the allocation of de facto private fishing grounds for large nets. These kinds of disputes had profound social implications since their outcome determined whether a community would be monopolized by a small, wealthy elite or based on equitable access to grounds for all fishing units.

One such dispute that involved the use of mediation is described by Kalland (1984) for the village of Jinoshima, in Fukuoka fief. It concerned the use of small nets which were licensed by, and therefore could be controlled by, the village leader. In that way he sought to monopolize for himself the sand lance (Ammodytes personatus) and yellowtail (Seriola quinqueradiata) fisheries. This man had virtually monopolized the former fishery from 1794 to 1835 via a written contract that the villagers had made with him in 1799, in which it was stated that no other villager could operate sand lance nets. A cheaper sand lance net that could be operated by one boat, and which was therefore financially more accessible to the ordinary fishermen, appeared in the region in the 1830s. The villagers proposed that 8 units be allowed to operate the new nets. The village leader refused, and the villagers took the case to the higher level district headman for mediation. Mediation resulted in a compromise; five new nets were permitted and the villagers made a written agreement that no more would be introduced. Nevertheless, three years later three more nets were brought into operation. In

part the leader was defeated since the written agreements were not considered legally binding by the fief, which had issued edicts against the monopolization of fisheries (Kalland, 1984).

The payment of cash compensation was also used to settle or prevent intra-village disputes. In 1840, in Jinoshima, for example, one unit petitioned to operate a net for tuna. This was recognized as being detrimental to yellowtail-netting in the same waters. Conflict was avoided when the tuna net unit agreed to pay compensation to the yellowtail netters. Via an edict issued in 1772 Fukuoka fief authorities stated that large nets should benefit all fishing households and not just those of a few capitalists. While special considerations were given to large nets that were owned cooperatively, the owners of private nets were required to compensate the village for any inconveniences caused. The level of monetary compensation was often set at 10 percent of the value of the catch of the individual large nets, and was divided among the village households (Kalland, 1984).

Inter-village disputes during the Edo Period were better documented, at least in Fukuoka fief (Kalland, 1984), and arose principally over the boundaries to exclusive rights territories, rights to common fishing and the licensing of large nets. Some disputes arose over the rights to common fishing in bays, accompanied by varying perceptions of different village exclusive rights territories, particularly those to sandy beaches. These disputes can be viewed as an effort by one village to expand at the expense of another. In some cases villages attempted to acquire prescriptive rights via systematic poaching in the territory of another. Usually such problems were resolved by compromise agreements worked out by the district headman and a committee composed of the leaders of several neighbouring villages in addition to those of the villages in dispute (Kalland, 1984).

(9) The Direct Transfer of Fisheries Rights by the Government

The islet studded coast of Japan, and particularly the coralline environment of Okinawa Prefecture, presents a particular management problem in Japanese waters, especially since island waters are invariably resource-rich and not uncommonly located seawards of the exclusive territory of any one village. Accounts of conflicts occasioned by the rival claims to such environments occur frequently in the fisheries history of Japan.

In the case of Okinawa, resource areas and migratory species outside customary village sea territories, both before and after the 1719 law, were under the control of the fief government, that in some cases transferred use rights to them to either individuals or to groups of fishermen. Two examples will serve to clarify some historical processes involved.

In 1673 the Ryukyu government awarded the temporary use right to three reef areas off the coast of Naha, Okinawa Island, which were all rich in such schooling fish as fusiliers (Caesio spp.), sardine (Sardinella clupeoides) and damselfish (Pomacen-

trus spp.) to Itoman fishermen, for an annual rent of 100 kan (375 kg) of copper money. Five years later the government transferred the temporary title to these reefs to two other villages near Naha, in return for an annual rental of 240 kan (900 kg). Then in 1691 the rights to the reefs were returned to Itoman. In 1729 the two other villages petitioned the government and succeeded in having the rights withdrawn from Itoman and returned to them (Tamashiro, 1915).

Doubtedless the government eventually wearied of these claims and bickering, since in 1729 it appointed six umiatai officials (two each from three villages) to control fishing in the reef area. Eventually the reefs were granted as an hereditary right to the six officials on the payment of a tax to the government. At a still later stage access to particular fisheries in the reef areas was transferred as a permanent right to villagers. The right to net sardine and damselfish that seasonally enter the area in large shoals was transferred to one village near Naha, in return for 250 kan (937.5 kg of copper money), and the rights for collecting and fish trapping were sold to Itoman village for 120 kan (450 kg).

In 1676 use rights to Chiibishi, another reef area with three small uninhabited islands, located some 13 km west of Naha and halfway to the Kerama Islands, were rented by the government to a resident of Naha, for 100 kan (375 kg). In turn this person transferred the rights to one village in the Kerama Islands, for the same rental fee. Thereupon in its turn this village rented out to three other villages some of the use rights for the employment of specified techniques and sometimes to take particular species. Net and line fishermen from one village were permitted to employ these techniques in Chiibishi on the payment of 70 kan (262.5 kg); those from another village were given the right to use drive-in nets for fusiliers, for 100 kan (375 kg); and in return for a rent of 100 kan those of another village were given the right of trapping (source unclear on the exact technique) as well as to collect sea cucumber (Holothuria spp. and Stichopus spp.).

Thus in Okinawa during feudal times the ownership rights and control of inshore fisheries devolved exclusively upon the inhabitants of adjacent villages. But villagers were, in return, obliged to pay tribute from their territory to both the fief government and to their village lord. These rights could be extended to members of other villages on the payment of entry fees. Similarly, rights to exploit the fisheries of offshore reefs and uninhabited islands belonged to the government, which transferred them either permanently or temporarily to either individuals or to villages, in return for a cash payment. Then, as now, the transfer of rights was effected and enforced through monetary payment and contractual obligations.

Feudal era documentation of fisheries is far from complete for any part of Japan, and that which is available rarely men-

tions intra-community conditions, largely because they were not recorded by fief officials, who left villagers responsible for village affairs. Nevertheless it is apparent that during the Japanese feudal era the control of coastal fisheries was, at the first level, regulated in broad terms by the fief, and particularly for large-scale netting operations. However, the details of implementation resided with the village, and particularly with the village officials and elites. Further, there is considerable evidence from some localities to show that despite a strong overall feudal organization the rights of the small-scale operator vis-a-vis village elites were upheld (Kalland, 1984). That resembles the present day FCA ethos. Further, and again like the Japan of today, there existed considerable heterogeneity in fisheries organization, as a consequence of the essentially local control. Thus in Japan's feudal era there existed well developed systems of local fisheries administration, themselves based on earlier precedents, that provided a traditional basis for the subsequent reform and modernization of fisheries organization.

THE POST-FEUDAL PERIOD (1868-1948)

With the Meiji Restoration of 1868 the feudal order collapsed throughout Japan. Disputes erupted within the fisheries sector and chaos reigned as the new Meiji government experimented with administrative structures.

In 1876, after the dissolution of the fiefs, the ownership of all fisheries reverted to the central government, which permitted operations on the payment of a use tax by the individual fishermen. A free-for-all ensued as new entries into coastal fisheries increased vastly, since agriculturalists clamoured for entry and a widespread effort to develop commercial fisheries arose. This led to the common occurrence of disputes over access and traditional rights among hitherto exclusively farming and exclusively fishing villages. And the highly capitalized big operator, generally a rich village merchant, bettered his position against the small-scale fisherman. Controversy and dispute in the fisheries sector intensified in the 1880s, owing to an economic depression consequent on the government's deflation policy, adopted to curb the inflation caused by the Civil War. As a result the central government was obliged to abandon its revolutionary system.

The traditional system that had persisted throughout the feudal era was revived, and de facto ownership of existing fishing grounds reverted to each prefecture, the administrative division that replaced the fiefs after the Meiji Restoration (Yabuuchi, 1958). In 1887 the Ministry of Agriculture, Commerce and Administration (Noshomusho) directed, via the "Standard Rules for Fisheries Association," the establishment of fisheries cooperatives to coordinate the use of coastal fishing grounds. That was the only intervention by the new central government in the fish-

eries sector during the nineteenth century. Thus until the first national Fisheries Law was enacted, in 1901, Japanese fisheries were controlled entirely by the local governments, just has they had been during the feudal era.

To maintain order and peace in the fishing communities, the 1901 law was based on traditional practises that had either developed or had been reinforced during the long feudal era. Many of the privileges of the large-scale operators, and therefore the inequities, were also perpetuated. However, the feudal rights were supplemented by the 1901 law. Since, in general, feudal rights had specified closely the extent of territorial rights and target species there remained room for the issuance of additional rights. Thus the 1901 Fisheries Law reflected both traditional rights stemming from the feudal era and those newly granted. Regardless of origin, all such rights were categorized into those for captural fisheries, beach seines, set nets, and mariculture.

In feudal times fishermen worked as members of a fishing village guild, membership in which was rigidly limited to persons born in a particular village. All members had to follow strictly the regulations of the guild, which established fishing zones, set seasonal limits and imposed restrictions on gear and methods. These traditional practises were incorporated into the 1901 law. The new law took the old guilds as the local administrative nucleus, designated them as Fisheries Associations (FAs), and charged them with carrying out fisheries management via the granting of fisheries rights and the issuance of licenses within the sea territory of a village or a group of villages. That law was amended in 1910 to permit the FAs to engage in economic activities, including cooperative marketing. But their principal function remained, as indeed it still does, the administration of fishing rights in coastal waters.

Implementation of the 1901 Fisheries Law seems to have done little or nothing to alleviate the economic plight of the small-scale fishermen, which owed much to their exploitation by middlemen and fish wholesalers. Further, owing to motorization and gear modernization, which began in the 1920s, efficient offshore boats started to fish in coastal waters. This led to serious conflicts with coastal fishermen whose economic conditions were further worsened by the operations of the larger, offshore commercial boats.

Economic distress in fishing communities reached a peak during the Great Depression, at which point the government attempted to break the grip of the middlemen by encouraging cooperative marketing by the FAs. Movement in that direction was reinforced after 1937 as Japan shifted to a war footing and the government increasingly controlled food distribution. At the same time the FAs were reorganized as part of the centrally-controlled wartime economy. One Association was established per village or town, and its president was appointed directly by the prefectural governor. During the 1930s, also, a movement began to stabilize the livelihood of coastal fishermen by extending the joint

fishing rights areas further offshore and to concentrate all such rights under the Fisheries Associations. In this way the coastal operators would be protected against the offshore fishermen and resource conservation would also be enhanced.

Despite centralized administration under a wartime economy, from the late-1930s, with the great decline in the number of middlemen, wholesalers and money lenders, many of the residual elements of feudalism were essentially eliminated from Japanese fishing villages and fish landing ports. Henceforth the fishermen themselves were the masters of the coastal fishing grounds and their own communities, a circumstance that would soon be confirmed by post-war democratization, undertaken at the direction of the U.S. occupation authorities.

THE DEFINITION AND CODIFICATION OF VILLAGE SEA TERRITORIES

The post-feudal processes involved in the definition and codification of village sea territories, largely the local results of the passage of the 1901 and 1949 fisheries laws, can be traced for various parts of Japan by analyzing various sets of 20th-century documents. Akimichi and Ruddle (1984) have traced these processes for Okinawa Prefecture for three periods: 1907-1940 ("First Period"), 1964 ("Second Period") and 1974 ("Third Period"). These periods represent important stages in demonstrating the evolution of local level fisheries organization. The first was characterized by the implementation of the 1901 Fisheries Law (the so-called "Meiji Fisheries Law"), when Fisheries Associations were being formed, feudal era customary regulations being replaced or complemented, local regulations codified, fishing territories registered and inter-Association entry rights contracts formally legalized. The mechanics of these processes were studied via an examination of all the available "Exclusive Fisheries Rights Documents" for each Okinawan Fisheries Association. The "Joint Fisheries Rights Registration Documents" of the second period reveal the situation when the processes of inter-FCA territorial consolidation and aggregation were almost complete, following passage of the 1949 Fisheries Law. The final period, examined through the latest available "Joint Fisheries Rights Registration Documents" of each FCA, which cover the last decade, provides a detailed picture of the emergence of the territorial situation prevailing today.

The First Period (1907-1940)

Starting in 1902, with the nationwide implementation of the Fisheries Law, passed the previous year, village sea territories established during the feudal era were mapped, codified and registered, in the case of Okinawa Prefecture at the Okinawa Prefectural Fisheries Office.

Typically, these boundaries coincided with those established through prior customary usage, extending a fixed distance off-

shore between the seaward projection of a village's terrestrial boundaries at the high tide mark (Fig. 2). In Okinawa, as in other areas, this presented no problems on the smaller islands, where the characteristic pattern that emerged was a seaward fisheries rights tenurial boundary set at a fixed distance offshore around the entire coastline. The distance of this boundary was not uniform throughout the prefecture (e.g., that of Tarama Island was set at 1.8 km offshore; Minna Island fixed 2.5 km and Yonaguni established a 0.9 km boundary [Fig. 3]), but invariably was fixed to ensure that all the resource-rich waters within a fringing coral reef together with the reef slope were included within a village's sea territory. In that way the exclusive right to a particular tract of reef fishing was ensured to a given Association, unless separate access agreements were also made with members of another Association(s) (vide infra). In many instances also included within these sea territories were tracts of adjacent deeper water beyond the reef slope in which separately licensed long- and deep line fishermen from the same Association alone could operate. This pattern of establishing a seaward boundary at a fixed distance offshore along an entire village coastline was not limited to independent islands. It was also adopted by several villages on the Okinawa "mainland," (e.g., Motobu, Nago and Onna Associations [Fig. 4]), where again the seaward limit was determined mainly by the distance of the outer reef slope from the shore.

The sea territories of other Fisheries Associations on Okinawa Island were defined somewhat differently during this first period, by the use of a base point(s), a precursor of what was to occur later. These base points were either the village terrestrial boundaries at the high tide mark, or some prominent onshore landmark clearly visible from the sea, such as a lighthouse, cape or a distinctive mountain peak. In establishing such boundaries a series of imaginery points were fixed on the sea surface -- their position being defined as a given distance along a specific angle from the base -- which were then linked-up to create a seaward boundary. Typical examples were the territories of Kunigami, in northernmost Okinawa and those of Naha, Itoman and other Associations along the southwest coast (Fig. 4). In most instances sea territories remained relatively loosely and simply defined during the first period, and continued to reflect predominantly customary laws.

The Second Period (1964-1974)

By the second period all the sea territories of FCAs in Okinawa Prefecture had been defined by the second method described above, i.e., by the use of base points and projected lines. All had contracted sharply compared with the first period such that in most cases, except where the shelf was narrow and deep water fairly close inshore, only relatively shallow areas, up to 50 m in depth, were included within the tenured waters of an FCA.

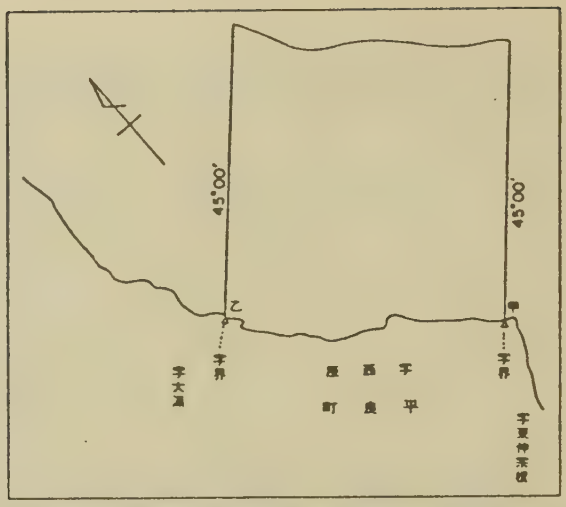

Figure 2. Map Accompanying the Registration Document for Exclusive Fisheries of Nishihara FCA (License No. 5072, first registered 27 March, 1928), Miyako Group

Figure Notes:

Location of Fishing Grounds: Seashore waters of Nishihara Section (*aza*), Hirara Chō, Miyako Province, Okinawa Prefecture.

Location of Basepoints: basepoint 甲—the boundary between Agari-Nakasone and Nishihara Sections of Hirara Chō; basepoint 乙—the boundary between Nishihara and Ōura Sections of Hirara Chō.

Areas of Fishing Grounds: the area surrounded by the seaward limit 3000 m from the coastline at the highest tide, the projection line at 45° from the basepoint 甲, and the projection line at 45° from the basepoint 乙.

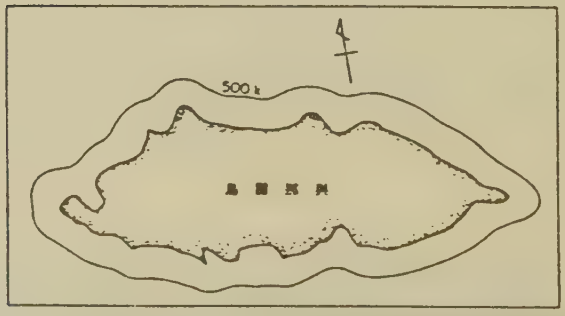

Figure 3. Map Accompanying the Registration Document for Exclusive Fisheries of Yonaguni Village Yaeyama Archipelago (License No. 4789, first registered on 4 November, 1918)

Figure Notes:

Location of Fishing Ground: Seashore waters of Yonaguni Village, Yaeyama Province, Okinawa Prefecture.

Areas of Fishing Ground: Seaward limit of no more than 500 *ken* (9.09 km) from the highest tide mark, at the full moon, on Yonaguni Island.

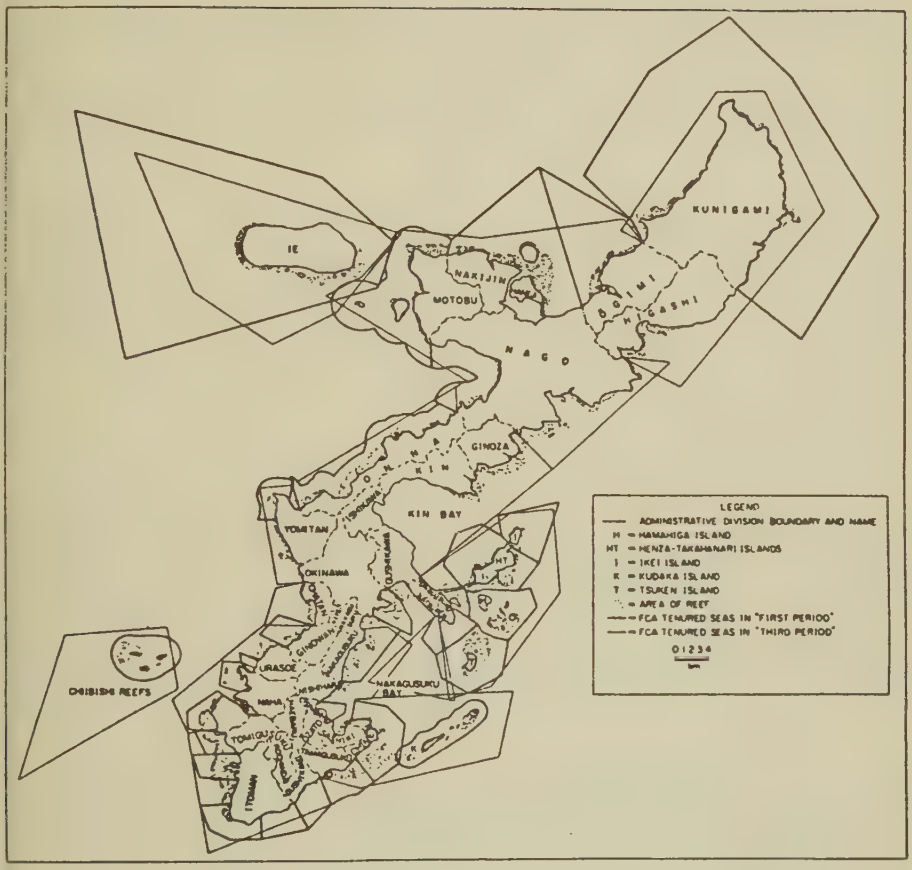

Figure 4. Boundaries of FCA-tenured areas around Okinawa Island during the first and third periods

By this period, too, a certain amount of territorial integration had occurred combining the formerly separate territories of different FCAs. In the remoter and poorer parts of the prefecture this reflected predominantly the high rates of rural depopulation that had taken place, as in the Yaeyama archipelago in the extreme southwest of the prefecture, where the formerly independent village FCAs were merged into the single Yaeyama FCA, for example.

On the other hand, in areas where large numbers of fishermen operated and where fisheries were more productive, territorial integration represented a simplification of a multitude of bewildering, mutual inter-FCA access agreements. This was particularly evident in the administratively complex and conflict-ridden waters of Nakagusuku Bay and its associated offshore islands, and in the southwest of Okinawa Island, where several smaller village FCAs were incorporated into the Itoman FCA (Fig. 4).

The Third Period (1974-present)

The integration process that commenced after the first period continued into the third. Some formerly separate FCAs were merged into a single unit, whereas although others retained their own individual administrative identity henceforth they had to share their tenured waters with other separate Associations. In many instances on Okinawa Island this was a simple arrangement that involved the sharing of sea space by just two FCAs (as in the case of Katsuren FCA and Yonagusuku FCA, for example, or that of Ishikawa FCA and Kin FCA). Other administrative arrangement were far more complex, the most complicated occurring in one section of Nakagusuku Bay, where seven independent FCAs share use rights.

As would be expected, this sharing of sea space has occurred only in the most productive and heavily claimed areas and in which conflict has been most frequent and intense. On the other hand where historically there has been little inter-FCA rivalry for resources, individual village FCAs have retained sole rights to a particular tract of inshore water, as in the case of the remote Kunigami FCA, in northernmost Okinawa Island.

This sharing of sea space has been one of the administrative mechanisms employed by Okinawa Prefecture to resolve the many tenurial and customary law conflicts that arose between and among FCAs over the most productive and conveniently located fishing grounds. The prefectural Fisheries Agency designated the territory to be shared and then left it to the FCAs concerned to formulate, implement and monitor the detailed executory rules concerning access, gear and representational authority to the higher administrative levels. It should therefore be recalled that in Japanese coastal fisheries the direct control and organization of fisheries by the prefectural and national governments extends only to the basic rules, licenses, rights and the fundamental conservation regulations issued to the FCAs. Beyond that it is up to the local FCA or federation of FCAs to organize their

own allocation and use of the sea space to which they have tenure. However, if inter-FCA conflicts cannot be resolved locally, then the prefecture intercedes to mediate.

One example, that of the four separate FCAs of Haneji, Nago, Motobu and Nakijin, which all share a common sea space, will serve to illustrate how this system operates. The execution contract among these four Associations for the use of their jointly tenured waters shows clearly that the primary control of the formerly separate sea territories of the individual FCA is still retained by that FCA. The document also reveals that in reality the joint sea space has been created more for the convenience of the prefectural administration and that no real merger in terms of completely unimpeded use of the shared sea space by members of all four FCAs has taken place. In effect, all that this document has achieved is the codification in a modern context of an old-established practise, i.e., the customary right of one village, on payment of a rental, to exploit the sea territory of another for either specified target species or using only a stipulated technology (vide supra).

Thus the Haneji FCA has reserved the right to employ drive-in nets in its area solely for its own members. But Haneji FCA and Nakijin FCA have a reciprocal agreement that, apart from the use of drive-in nets, permits their members to freely work each other's territory. Nakijin FCA and Motobu FCA have a reciprocal agreement that permits their own gill netters to work in specified areas of each other's territory. Members licensed for lift netting for live bait from any one of the four FCAs can operate freely throughout the entire shared sea territory. Finally, and again for administrative convenience, one FCA, in this case Nago, has been designated as the representative of the four Associations at the prefectural level.

Again, these joint use rights of several FCAs to a particular tract of coastal waters follows long-established precedents. In 1924, for example, mutually accepted rules were agreed on by the Executive Committees of the Nakijin, Haneji and Ogimi FCAs for the sharing of the marine resources of two reef areas. (Although these rules are not spelled-out in the 1927 registration document of the Ogimi FCA, that document clearly states that Ogimi fishermen must obey them in their fishing activities.)

THE FOUNDATION FOR PRESENT ENTRY RIGHTS

For Okinawa Prefecture customary use rights in, and entry rights to, the sea territories of other FCAs were examined for the same three periods discussed in the preceding section, based on the same three sets of FCA documents (Akimichi and Ruddle, 1984).

Entry Rights during the First Period (1907-1940)

With the implementation of the 1901 Fisheries Law, Fisheries Associations had to legally claim and register their own sea territories. At the same time, any Association (or individual) that wished to obtain rights within the tenured waters of another Association had to officially register those rights, after first reaching an agreement on the terms and conditions of the entry contract with that Association.

The specialized fishing community of Itoman, which was established as a Fisheries Association in 1903, was particularly active in seeking and making entry agreements with other Associations, and by 1907 had settled contract agreements with five other Associations (Itoman City Office, 1982). As other villages gradually established their own Fisheries Associations, Itoman made contracts with them also.

The Fisheries Association registration documents of the first period are illuminating with regard to the way in which customary use rights of other villages within the newly registered sea territories of the Associations were acknowledged and permitted to continue. These documents also reveal the geographical range of the activities of the highly specialized community of Itoman fishermen, and the manner in which their customary usage of other village's sea territories was acknowledged and codified.

In the 1927 registration document of the Ogimi Fisheries Association, for example, it was stated that local fishermen could not prevent the entry of those from Itoman who engaged in the collection of turbo shells (Marmarostoma argyrostoma) and the kaininso seaweed (Digenea simplex), "... Because Itoman fishermen observe the conservation rules agreed upon by the Ogimi Fisheries Association." (Unfortunately these conservation rules are not stated in the agreement, and no other document concerning them has been located.) Similarly, because of adherence to local conservation regulations, the 1927 registration document of the Uken Association also permitted Itoman fishermen access to collect turbo shells, although in this instance only 40 persons were allowed to operate.

In other cases Itoman fishermen were permitted entry to conduct only closely specified techniques and for only specific target species. Thus the 1921 registration document of the Chinen Fisheries Association, for example, permitted them to collect sea cucumber, turbo shells and four other types of shellfish (Lunatia marmorata, Tectus pyramis, T. niloticus and a Tridacnidae), as well as to harvest kaininso seaweed, provided that the Itoman fishermen obeyed the conservation rules of Chinen (unstated in the document). In addition, they were permitted to conduct two types of drive-in netting, sardine netting and fish spearing in Chinen's waters.

During this period Itoman fishermen were also able to extend

their claims into the sea territories of the remoter, southwestern Miyako islands and the Yaeyama archipelago. The latter case is particularly noteworthy since it represents an example of old-established genealogical links among highly specialized fishing communities being utilized to gain entry to the waters of other Associations, earlier generations of Itoman fishermen having settled the Yaeyama communities of Tonoshiro and Arakawa, on Ishigaki Island, in the 1880s, from which they initiated the commercial fisheries of Yaeyama (Ed.Comm.Yae.,1954; Makino, 1975; Ruddle and Akimichi, n.d.).

In the Yaeyama archipelago, for example, according to its 1918 registration document, the Taketomi Island Fisheries Association permitted Itoman fishermen the right to collect all the shellfish and to harvest all the seaweeds that were open to exploitation by its own members, as well as to operate gill nets and fixed nets for reef fish, to net sardines, to trap reef fish and to spear octopus. The rights granted to the Itoman fishermen in Yaeyama appear to have been noteably freer of restrictions than were those granted elsewhere. This is a reflection, perhaps, of the long-enduring extended family organization characteristic of Okinawan society.

In comparison, in the Miyako Island group the contracts made with the local fisheries associations were closely restricted. In 1928, for example, the Miyako Fisheries Association permitted Itoman fishermen the right to use two types of drive-in net in its waters, but only one net of each type was allowed (i.e., only two fishing units were allowed to enter). Similarly, in the same year the Hisamatsu Association, also in the Miyako group, permitted Itoman men to use only one drive-in net in its waters (i.e., only one fishing unit was permitted to work in Hisamatsu's waters).

Neighbouring Fisheries Associations made more frequent entry claims than did the specialists from Itoman. In many instances these became highly complex and overlapping, as in the waters of Nakagusuku Bay and the nearby islands off the east coast of Okinawa Island. In that area, for example, the 1927 registration document of Kudaka Island Fisheries Association shows that fishermen from the four neighbouring associations were permitted access to its waters. On payment of an entry fee, 16 fishermen from the Ou village Association were permitted to collect five types of shellfish; 5 boats from the Minatogawa Fisheries Association were allowed, on payment of an entry fee, to conduct squid-jigging in Kudaka's waters; based on customary rights, and provided that an entry fee was paid and using a maximum of 10 nets, men from Tsuken Island Association were permitted to conduct fish driving for juvenile rabbitfish (Siganus spp.); and men from the Chinen Association were allowed to spear reef fish in Kudaka's waters.

It is apparent from the registration documents examined that these inter-Association entry contracts made during the years following the implementation of the 1901 Fisheries Law basically

followed customary practise. That is, where exclusive fishery rights were claimed by an Association or an individual, fishermen from other Associations, or other individuals, had to pay an entry fee for such temporary access and use rights. Further, in most cases close specifications were set on the gear that could be employed, the target species that could be sought and on the number of fishing units permitted entry.

CHAPTER 2: THE PRESENT DAY ADMINISTRATION OF COASTAL FISHERIES

Present day Japanese fisheries are basically administered according to the Fisheries Law of 1949, together with some related legislation, particularly the Fisheries Cooperative Association Law of 1948.

The Fisheries Law of 1949 was designed within the framework of the post-W.W.II democratization of Japanese institutions, and had as its principal objective (Article 1) the establishment of "...The fundamental system relative to fishery production, to attain promotion of fishery productivity and democratization of fishery by an overall exploitation of the waters through the function of fishery adjustment organizations whose principal constituents are fishery operators and fishery employees" (Zengyoren, 1979).

To attain that goal detailed modifications to the 1901 Fisheries Law were based on three principles intended to eradicate the remaining elements of feudalism:-

(1) Henceforth fishery rights and licenses were to be granted only to fishermen or fishing enterprises actually engaged in fishing, and leasing arrangements were prohibited;

(2) The local administration of fishing rights was to be invested only in Fisheries Cooperative Associations (FCAs) or similar organizations; and

(3) Sea Area Fishery Adjustment Committees, to be established for each sea area, were charged with preparing comprehensive plans for the full and rational use of coastal fishing grounds, and based on these plans fishing rights and licenses were to be granted to FCAs, other bodies and individuals.

Previously, in 1948, a democratic Fisheries Cooperative Association Law had been enacted, the specific purpose of which (Article 1) was "...To contribute to the purpose of the national economy by increasing fishery productivity and improving the economic and social status of fishermen and fish processors through the development of FCAs." This law restricted membership in FCAs to fishermen resident in the jurisdictional area of the Association and who were engaged in fishing for 90-120 days a year, the precise period being determined by each FCA. Aimed again at sweeping away remaining vestiges of feudalism, among the

democratic principles embodied in the law were voluntary participation (although nobody could fish without a valid membership), democratic control by the membership (by each member being allowed only one vote), and an election and recall system for officers (Zengyoren, 1979).

As a consequence, the FCA has emerged as a vitally important intermediate organization that links the central and prefectural government with the individual fisherman. Although comprising the fundamental unit of government fisheries administration, and being the key organization in the implementation of official fisheries projects, an FCA belongs entirely to the local community of fishermen. The FCA lies at the hub of modern Japanese fishing communities in which it constitutes the focus of social and economic activities. But, as throughout modern history, its principal function remains the planning, management and continuing sustained development of the sea territory to which the individual community has tenure. Fisheries are managed today according to a comprehensive dual system of rights and licenses, both administered by the Ministry of Agriculture, Forestry and Fisheries, according to the Fisheries Law of 1949. In practise, the Ministry delegates most of the responsibility for administering coastal waters to each prefecture.

Fishery rights, which are defined as the right to conduct a particular fishery within a confined public sea, lake or river area, refer in the marine environment to coastal waters, and cover those types of fishery that either employ fixed gear or that exploit a relatively immobile benthos. All coastal waters, with the exception of ports, their adjacent tracts and tracts reclaimed for industrial zones, are divided-up among FCAs or Federations of FCAs (Table 1). In contrast, licenses govern those types of fishery that move gear over often considerable distances in search of highly mobile fish. They are issued for coastal, offshore and distant water fisheries.

Fisheries Rights

The fishing rights system, which basically continued historical practises, is intended to protect coastal fisheries and fishermen against the encroachments of other fisheries and other economic sectors by granting them property rights (in rem), which are legally protected in full against third parties. However, these rights cannot be loaned, rented or transferred to others, nor can they be mortgaged. Such rights are regarded as the exclusive property of the fishermen to whom they are granted.

Three principal categories of rights are recognized under Japanese law: Joint Rights (kyodo gyogyoken), Demarcated Rights (kukaku gyogyoken) and Set Net Rights (teichi gyogyoken) (Table 1). Joint Rights are granted exclusively to an FCA or to a Federation of FCAs, which in turn distributes them among the membership.

TABLE 1: THE STRUCTURE OF JAPANESE FISHING RIGHTS AND LICENSES

CATEGORIES	GRANTED TO
RIGHTS	
(1) JOINT FISHERY RIGHTS	
A. Gathering seaweed, shellfish and other benthos.	
B. Specific small-scale net fisheries.	Exclusively to FCAs.
C. Beach seines, unmotorized trawling, fish shelters.	
(2) DEMARCATED FISHERY RIGHTS	
A. Special Demarcated Rights.	Exclusively to FCAs.
B. Demarcated Rights.	To FCAs, private organizations and individuals.
(3) LARGE-SCALE SET-NET FISHERY RIGHTS	Ditto.
LICENSES	
(1) LARGE-SCALE OPERATIONS IN DISTANT WATERS	Mostly to private organizations and individuals.
(2) MEDIUM-SCALE OPERATIONS IN DEEP WATERS	Ditto.
(3) SMALL-SCALE NEARSHORE OPERATIONS	FCAs or individuals.

Joint Rights are issued for the coordinated use of a fishing area and its aquatic resources by all members of an FCA. Three categories are recognized; those for the benthos catch, those for small stationary gear set at a depth of less than 27 m, and those for beach seines. The allocation of a fishing territory among these types of gear and the fishermen to be engaged in their operation is internally decided by an FCA.

Demarcated Rights are granted for aquaculture, and are usually valid for five years. They are applied to the small-scale cultivation of seaweed, shellfish, shrimp, sea bream (Pagrus major) and yellowtail. There are two classes, "Special Demarcated Fishery Rights" and "Demarcated Fishery Rights." The former are granted when many fishermen wish to engage in different types of aquaculture within a fairly large but sheltered, and thus relatively pollution-prone location, and in which, therefore, diverse activities with differing environmental quality requirements must be managed in a compatible and equitable manner. The latter are granted for pond aquaculture that occupies a defined and fixed site, and thus which demands little coordination with other, potentially incompatible activities.

Rights for Large-Scale Set Net Fisheries are applied mainly to herring, migratory trout and salmon fisheries, and in Hokkaido, using gear set at depths greater than 27 m. They are granted to private individuals and private organizations, as well as to FCAs. Since the high capital investment and large operating budget demanded by this technique effectively limits the number of nets, the area and sites of operation can be restricted easily by the prefecture. Small- and medium-size nets, on the other hand, can be operated by many small-scale fishermen within a given area and so they are managed by the FCAs via Joint Fishery Rights.

In every instance joint rights embrace the entire sea territory of an FCA, whereas demarcated rights and those for set nets are granted only for specific areas within the joint rights area. Further, whereas all fishermen belonging to a specific FCA are entitled to fish in that associations's joint rights areas only a limited number are granted set net and demarcated rights. Whereas all FCAs have a joint rights area the same is not true of the other two types of rights, which are granted only if an FCA has areas within its sea territory suitable for them.

Fishing Licenses

Licenses for small-scale fisheries conducted in coastal waters are issued by each prefecture to individual fishermen, or to an FCA, where the number of applicants is large. In the latter case the prefectural government decides only the number of licenses to be allotted per FCA, and each Association then distributes them among its membership. An FCA may receive several or more individual licenses, as a "package," which then permits individual fishermen to switch activities in different years in consideration of technological change or altered family or personal

circumstances, for example. In principle licenses are issued for fisheries not covered by fishing rights and in particular for migratory species taken from trawlers larger than 15 gross tons and purse seiners over 40 gross tons. Fishing licenses are not regarded as a legally protected property right, as are fishing rights, and licensed fisheries operate under free competition.

In the interest of resource conservation the Ministry places limits or outright bans on some fisheries. Certain fisheries, for example, are classified as "Semi-Designated," and require an annual renewal of permission from the Ministry. Such fisheries that require ministerial permission, as do those regulated at the prefectural level, may also be further restricted by limitations on vessel size and number, gear type and size, seasonal use, fishing ground location and catch size.

The Distribution of Fisheries Rights and Licenses

When fisheries rights are awarded exclusively to FCAs no problems of distribution occur between the Association and the government, and distribution among its membership is an internal question to be resolved by each FCA. Allocation problems could arise in rights to Large-Scale Set Net Fisheries and in Demarcated Fisheries, where private organizations and private individuals, in addition to FCAs, are eligible to apply for rights at the same time, were it not for particular conditions of eligibility and an order of priority set forth in the Fisheries Law, that ranks FCAs first.

Although the details vary somewhat according to the specific fishery, those eligible to apply for fisheries rights must possess prior fishing experience, must not have been found guilty of flagrant violations of the Fisheries Law or pertinent labour regulations, nor can they hold other fishery rights. Eligible applicants are then ranked as follows: (1) FCAs; (2) organizations composed of a large number of fishermen from a particular district; (3) Production Unions consisting of 7 or more fishermen and which are entitled to financial assistance; and (4) private individuals and private organizations. Ceteris paribus, by law, FCAs will always receive top priority for the award of any fisheries rights, whereas private individuals and private organizations will always be ranked lowest.

That arrangement for the distribution of fisheries rights breaksdown, however, when an FCA lacks experience in a particular fishery. When the application of an FCA is disallowed, usually through alleged lack of experience, the ultimate decision is left to the prefectural Sea Area Adjustment Commission. In the granting of fisheries licenses, however, and particularly for small-scale fisheries, the only criterion applied is eligibility. No order of priority, as in fisheries rights, is applied although the basic principles of such an ordering do function as implicit guidelines.

SEA-AREA ADJUSTMENT COMMISSIONS

One of the objectives of the Fisheries Law of 1949 was to develop the nation's fisheries in a democratic, comprehensive and coordinated fashion. To achieve this, fisheries adjustment commissions were established to cover all Japanese sea areas and to ensure the coordination of prefectural fisheries development within an overall national framework. These commissions form an essential intermediate link between the national and prefectural levels of Japanese fisheries administration.

There are two types of such commission. First is the Sea Area Fishery Adjustment Commission (kaiku gyogyo chosei iinkai), which is under the joint jurisdiction of the Minister of Agriculture, Forestry and Fisheries and the Governor of the prefecture, metropolis or part of Hokkaido that it covers. The second type is the United Sea Area Fishery Adjustment Commission (rengo kaiku gyogyo chosei iinkai). This type is under the joint jurisdiction of the Minister and the Governor of the local administrative unit that established the particular commission. In principle, this system of joint jurisdiction ensures nationwide adjustment.

The first type of commission is established by the Ministry, which divided the marine waters into 65 sea areas as administrative units for fisheries adjustment. Essentially, each sea area corresponds to the maritime zone of each coastal prefecture, apart from those controlling the marine waters of major metropolises, and except for the island of Hokkaido, which, although a single prefecture, because of its large size and the importance of its fisheries is divided into 10 sea area units.

In principle, each Commission is composed of 15 Commissioners, 9 of whom are officially elected by the fishermen and 6 appointed by the Governor (4 of whom are fisheries specialists and 2 who represent the public interest). But the smaller sea areas designated by the Minister have fewer Commissioners (6 elected members, 3 specialists and one person representing the public interest).

The main function of these powerful bodies is the preparation of plans for fishing grounds. Their other important responsibilities include decision-making on the eligibility of fisheries rights and licenses, conflict mediation, and the advising of local government on the management of living aquatic resources.

Based on those plans and that advice, detailed regulations to control fishery operations and to ensure the conservation and rational exploitation of resources are established by the Fisheries Agency of each prefecture. Prefectural regulations are supplemented and enforced by each FCA.

Whereas the Sea Area Fishery Adjustment Commission is established to make, monitor and modify fundamental management plans

for sea areas under the control of a local government, the other type of commission, the United Sea Area Fishery Commission, is established as a particular need arises. One of the major functions of these united commissions is the control of the fishing of seasonally migratory stocks -- which, by definition, cannot be regulated by any one prefectural government alone -- via the issuance of licenses for such fisheries as tuna long-lining, salmon drift-netting or squid-trolling.

These commissions can be established in one of three ways: should the need arise to make a comprehensive, overall adjustment in a particular area, the Minister can order the organization of a United Commission; a governor of any local administrative division can establish such a Commission to solve a particular problem in a zone that covers more than one Sea Area Adjustment Commission (he must do so in coordination with the governor of another local government unit, should the intended United Commission cross local government administrative boundaries); and third, in consultation with equivalent commissions, a Sea Area Fishery Adjustment Commission can establish a United Sea Area Fishery Adjustment Commission.

In areas such as the Inland Sea coastal fishing is immensely complicated and conflicts commonplace and intense as a result of many fishermen from different FCAs, prefectures and Sea Area Fishery Adjustments Commissions often employing distinct and conflicting gears and operating ostensibly in a shared water space. Under such conditions permanent United Sea Area Fishery Adjustment Commissions are established and are under the direct control of the Ministry.

THE ROLE OF THE PREFECTURE

Detailed regulations to control fishery operations and to ensure the conservation and rational exploitation of living aquatic resources are established, as required by local conditions, by the prefectural Fisheries Agency. Essentially, such regulations define closed seasons and other limitations for the various fisheries, control the kinds of gear and methods that may be employed by professional fishermen as well as those specifically for recreational fishing, establish the minimum exploitable sizes of particular marine animals, specify closed areas for the purpose of resource conservation, and set various "associated" rules.

Here, administration at the prefectural level is illustrated with particular reference to Okinawa (Okinawa Prefecture, 1977), since information on the application of the Japanese system of inshore fisheries management in this predominantly coralline, sub-tropical environment may be of heuristic value to fisheries administrators operating under similar environmental conditions elsewhere in Asia.

Complete Prohibitions

Neither turtle eggs of any species nor corals of the Orders Scleractinia, Gorgonacea and Stolonifera may be collected in Okinawa Prefecture, nor may they be owned, processed or sold if they originate from prefectural waters.

Size Limitations

In the interests of resource conservation, the exploitation, together with the keeping and sale of their products, of specific marine animals is prohibited if established minimum size requirements are not met. Harvesting of seed stock for aquaculture is excepted, provided it is specifically licensed by the governor.

Closed Areas

According to the need to conserve marine resources, restrictions may be placed on exploitative activities in particular locations. Such restrictions may be applied to the use of a particular gear or technique, to the exploitation of a particular fishery, or can be a total ban on any exploitative activity whatsoever.

Closed Seasons

Except for the gathering of seed stock for aquaculture, closed seasons are imposed on the exploitation of turtles, Eucheuma seaweed and spiny lobsters. In the interest of conservation, it is illegal to capture the green sea turtle (Chelonia mydas), the hawksbill (Eretmochelys imbricata) and others, and to harvest red seaweed during the two month period June 1 through July 31 each year. Lobster fisheries are closed for three months, from April 1 until June 30. These closed periods correspond with the spawning seasons of the animals and the propagation period of the seaweed.

Limitations on Fishing Gear

This category of regulations pertains mainly to forbidding the use of certain types of nets, controlling the use of electrical gear, restricting boat numbers in particular types of fishery, and limiting the methods that may be used by amateur fishermen.

Okinawa Prefecture imposes two types of restrictions on net use. First, nets with a mesh size of less than 28 mm may not be used in the fish drive, except to take specified small target fish, including juvenile rabbitfish (Siganus spp.), cardinalfish (Apogon spp.) and damselfish (Abudefduf), among others. Second, in summer, from June 1 until September 30, the use of the trammel gill net is prohibited, since the fish caught would spoil rapidly in the high temperatures of the shallow waters inside the reef, and also because this is the spawning period of several species of sea bass.

The use of electricity in fish operations is also restricted. In Okinawa it is illegal to operate underwater gear with the use of electricity, and in medium- and small-scale seine net fisheries, lift netting and pole-and-line fishing, 5 kw is the maximum permitted capacity of electical lamps fitted per boat.

Boat numbers are also restricted in certain types of fishery. For lift netting a maximum of two boats can be employed, and in medium-scale seine netting no more than three can be used.

Recreational fisheries are also restricted to pole-and-line, hand line (without the use of a dynamo-powered light or chumming), a small landing net or scoop net, a casting net thrown from the shore, spearing or gaffing, and wading for collection in shallow waters. Licensed, professional fishermen and crew members of fishing boats are prohibited from employing these techniques.

Further prefectural control is excercised by the issuance of licenses for specific categories of fisheries in waters not included within the Demarcated Area Rights of an FCA. Licenses, issued per boat and not per fishereman, and valid for three years, must be obtained from the governor to engage in small-scale seine netting (using boats of less than 5t); coral-collecting (using boats of less than 5t); tuna, bonito, swordfish and shark fisheries (with boats 5-20t and employing either floating long line or angling gear); long line fishing for demersal species (from boats larger than 5t); collecting fish for sale to aquaria if from the 125 species described in the "Fisheries Rule Book"; and, using boats larger than 5t, divers assisted by compressed air, small-scale fixed netting, stand netting, lift netting, stationary gill netting and fish driving.

THE ROLE OF THE FCA

In terms of day-to-day operations, Japanese littoral fisheries are, although subject to higher level regulation, essentially self-managed by the individual FCAs or federations of FCAs. This relatively high degree of local autonomy enables local fishermen, through their role on FCA committees and at general meetings, to determine the division of access rights among individual FCA members and to ensure that the interests of all parties involved are considered and accounted for. It also permits higher level fishery regulations to be adapted to regional differences in ecology, target species, fishing effort and level of industrialization or other impacts on local fisheries, among other things. Further, it guarantees that fishery management strategies, processes of conflict resolution and inter-personal and inter-group relationships will be, to a large extent, based on local customary law and codes of conduct.

Although the interpretation, implementation and enforcement of national and prefectural fishery regulations is to a large

extent in the hands of the FCA, there is nevertheless constant and continual interaction among the levels of the fishery administration to verify the various interpretations and understandings of laws and regulations. This is clearly a legacy from feudal times, since, as has been demonstrated above, the Japanese small-scale fisherman has long been affected by higher level authorities. However, it is also of great practical importance since fishermen, commonly unaware of all the higher level laws and regulations, operate mostly according to local customary law. On the other hand, prefectural and national officials are normally ignorant of customary law.

The continual process of interaction among the levels permits the incorporation of customary law within the regulations made at the higher levels and serves to foresee, prevent and resolve conflicts that might arise between the two bodies of law. The control of resources from within a fishing community as well as from above are two complementary and mutually reinforcing channels that constitute a viable system for the administration and management of coastal fisheries.

The basic function of a Japanese FCA is to administer local coastal fisheries in terms of the Fisheries Law of 1949. This they do mainly by implementing and enforcing national and prefectural legislation and regulations which they supplement or complement, as local conditions require, by rules and regulations locally-made by the FCA. These local rules are then formalized in an FCA's "Executive Rules for Licensed Fisheries," which are revised periodically and submitted to the prefectural fisheries office for re-approval each time an FCA applies to have its rights renewed. A second principal function of an FCA is to represent its membership's interests at higher administrative levels and vis-a-vis such private parties as industrial corporations whose actual or potential operations have or would have an impact on local fishery operations, and where necessary to negotiate compensation payments (vide infra).

The Functioning of FCA Administration

As specified by law, the ultimate legislative body of an FCA is the General Assembly (sokai) of its entire membership, which convenes either annually of bi-annually, unless exceptional problems require an extraordinary meeting. In large FCAs, such as the 700 member Yaeyama FCA, or the 400 full-time members of the Otaru FCA, in Hokkaido (Short, n.d.), the General Meeting is too unwieldy for routine matters. It is therefore represented by a Representative General Assembly (sodaikai), which itself meets only annually to review the previous year's activities and to approve plans for the following year.

The routine functioning and external relations of an FCA are handled by an Executive Committee elected by and responsible to the General Assembly. That of the Otaru FCA, for example, consists of a President (kumiaicho), a Vice-President (senmuriji), two advisors (kanji) and nine regular members (riji). The presi-

dent and vice-president are professional administrators whose re-election is virtually a certainty. Regular members are, however, all fishermen who must win votes from within their community to ensure re-election.

Despite being represented, administered and advised by a Board of Directors, through their small-group decisions the individual fishermen of an FCA retain control of their own affairs, especially those pertaining to access to a fishery. In Otaru, as in the Yaeyama and Itoman FCAs of Okinawa Prefecture, fishermen are organized into fishery type squads (han) and location of residence groups (ku). Opinions of these smaller units are communicated to the Board of Directors, which is obliged to follow them as closely as possible. In this way the fishery squads and residential groups are the main entities in policy-making with respect to resource allocation.

The role of fishing squads in FCA administration is well-illustrated by the small-scale stake-netters of Okinawa. There the stake-net is a widely employed traditional technique, particularly among the fishermen of the Itoman FCA.

This stake-net fishery has been but little controlled by formal regulations. Indeed, prior to the General Meeting of the Itoman FCA in 1983, in common with other types of fixed gear, the only formal regulation applied was a prohibition on the use of other fishing techniques in the coastwise area in front of a stake net and that might intercept its catch (Ministry of Agriculture and Forestry, 1938, cited in Akimichi, 1984). Then, in 1983, the maximum number of nets that could be employed per fishing unit was defined by formal regulation.

In contrast, this fishery was strictly regulated among the stake-net fishermen themselves via regulations drawn-up during an annual assembly of the stake-netters. Although legally informal, it is these rules that govern entirely the behaviour of the stake-netters, for whom they are iron-clad.

As is usual among fishing squads within an FCA, the principal purpose of an annual meeting is to discuss issues arising from use rights and to ensure equitable use of the territory, as well as to resolve inter-group conflicts. Among the use of territory issues discussed by a stake-net squad would be, for example, the proper allocation of nets and net-fixing procedures in newly discovered fishing territories. When mutually acceptable solutions to problems cannot be reached, further discussion is deferred until the following year's meeting.

That the decisions reached and the regulations established at such meetings are regarded as formal within the stake-net squad is readily apparent, since one of the members is appointed secretary to the meeting, of which he has to keep a detailed record. This record, when added to those of previous meetings, then constitutes the "Rule Book" through which future potential conflicts are, if possible, anticipated and managed, and if that

is not possible, resolved. Further, although annual squad meetings had been held only infrequently since 1945, those regulations are still observed.

The main regulatory principles and rules of stake-net fishing decided at the annual squad meetings over the years are as follows. As is the case in most other types of fishing, the rule that guarantees priority rights to a first-comer to work a specific fishing spot is strictly upheld to define territorial division. In the Okinawan stake-net fishery first-comer's rights are claimed by physically marking the territory that it is intended to work the next day. This claims a right that is only valid among users of a particular technology, hence a location thus marked by a stake-netter could be preempted by a gill-netter, for example, but never by another stake-netter. However, in the few territories that are large enough to be worked by two or more stake-netters, late-comers can gain admittance by seeking permission from the first-comer to operate simultaneously.

Each stake-net territory is named and specific rules governing the use of each except the least productive have been drawn-up. A particular fishing territory embraces from one to five fishing spots, and in the smaller territories the priority right rule is applied to all the included spots. However, squad regulations for the use of the few larger territories permit spots to be worked simultaneously by two or more stake-netters. Where territories can be shared further regulations prescribe the direction and distance over which wing nets may be extended. That is, territories may be shared if they are large enough to support the mutually unimpeded operation of two or more nets. Supplementary rules also govern the arrangement of wing nets in particular territories. Typical is that requiring the inflection of the ends of wing nets in certain locations, to permit equitable access.

Within an FCA equal access to an entire exclusive rights area is not necessarily enjoyed by all fishermen in all types of fishing. Some waters are reserved for the exclusive use of individuals or squads based on agreements made between the various squads and approved by the Board of Directors. In Otaru management strategies vary greatly among the different types of fishery. Whereas gill-netters, for example, may fish anywhere in the FCA's territory, in the small-scale fixed-net fishery individual operators are assigned fishing spots based on their traditional usage patterns, since these nets must be individually tailored to the topography of the sea bottom in each spot fished (Short, n.d.). In Tobishima, in northern Honshu, octopus holes within a joint rights area are owned and inherited as personal property (Nagai, 1951). In other fisheries, as in Yaeyama, for example (*vide infra*), a lottery is used to allocate valuable fishing spots among squad members whereas free competition and first-comer's rights prevail in less-productive locations.

Supplementary Rules

In the Yaeyama FCA of southwestern Okinawa, for example, only fully paid-up members possessing the appropriate licenses and who work for at least 90 days per year are permitted to fish. Rights and licenses can neither be transferred nor loaned, but they can be inherited by a kinsman or a successor, provided that such a person is an FCA member (Ruddle and Akimichi,n.d.). That FCA's local rules state that four kinds of seaweed together with spiny lobsters are seasonally closed, and that the use of a stationary gill net is forbidden during the summer (June 1 through September 30). All other fisheries may be operated year-round. However, the President of the FCA may at any time restrict the harvesting of any species to conserve resources and to control the fishery.

Further, with the exception of the black-lipped pearl shell (Pinctada margaritifera), which can also be exploited by corporations, local rules state that exploitation of benthos is limited to individual fishermen, who can harvest them freely within the waters belonging to the FCA. Net fisheries, however, are more strictly controlled, and are limited to those FCA members who own a boat and with experience in operating the gear licensed. Entry is also controlled by restricting the numbers of nets per fishing unit.

The President of the FCA can restrict any of the aspects of net fisheries regulations, but in this case he does so on the advice of the "Integrated Management Committee for Fisheries," (gyogyo togo kanri iinkai) which consists of three representatives of each type of net fishery. This consultative committee also decides on the membership of the net fishing category, as well as on the period and area of exploitation by netting, together with the associated conditions for each type of fishery within the netting category. The decisions of that committee are reported to the Executive Committee (rijikai) of the FCA, which, in turn, submits them to the General Assembly (sokai) of all the members of the FCA.

FCA Membership and the Transfer of Rights

As formally stated in the Fisheries Law (1949), fisheries rights and licenses can be given only to individuals or enterprises actually engaged in fishing, and leasing arrangements were forbidden. Earlier, the Fisheries Cooperative Association Law (1948) had restricted membership in an FCA to residents of the area covered by a particular Association and to persons engaged for a minimum of 90-120 days/yr in fishing, as locally decided (vide supra). Further, although these rights were the property of individual fishermen they are restricted in that they cannot be loaned, rented, transferred or mortgaged to others. Rights can, however, be inherited by a kinsman or a successor, provided that such a person is also a member of the same FCA.

The restrictions placed on access to a fishery and the transferability of fishing rights set forth in these laws were intended to eliminate absentee ownership and the concentration of assets and profits in the hands of a few non-fishing capitalists, and thus once and for all to break the stranglehold over coastal fisheries by wealthy "sealords" that in pre-war times not uncommonly kept the working fisherman permanently impoverished and beholden by an endless cycle of indebtedness. In their intent to control excesses it is unlikely that these laws ever really sought to prohibit all transfers of rights other than those based on succession or inheritence or to make access totally equitable nationwide, since clearly this would have been impossible given the great weight and variety of tradition and customary law throughout Japan. Further, as has been demonstrated earlier, the transfer of rights (either permanently or temporarily) has historically been a major factor in the control of access to Japanese coastal fisheries. In earlier periods village rights were extended to other communities and individuals on the payment of fees, and government rights were similarly transferred in return for cash payments.

Those limitations placed on the disposition of an individual's property rights may seem to represent an attempt to impose uniform nationwide entry regulations on a wide variety of traditional customary regulations long-established in thousands of individual fishing communities. Although both the letter and the spirit of the laws is upheld to exclude absentee capitalists from joint fishing rights areas, they are essentially of only secondary importance to unwritten, village customary laws.

Village customary laws with respect to the acquisition of fisheries rights and their method of transfer vary considerably according to local traditions. This precludes easy generalization about the situation throughout Japan, since local practise -- even though upholding the spirit of the national law -- may differ considerably from its letter, on a characteristically Japanese case-by-case basis. Further, only scant information is available on the topic since, not surprisingly, few informants in fishing communities are willing to discuss customary local practises that contravene the letter of the national laws. Thus only a few examples are used here to illustrate the present situation.

In general, entry to coastal fishing is through on-the-job training via which youngsters acquire fishing skills over many years. After this they receive rights within their own community's tenured waters. Some communities formalized this through rigorous apprenticeships, such as the renowned system formerly practised by the specialized fishing community of Itoman, Okinawa. In this system the ambushi (stake net) fishery was especially important, since young boys were initiated by this technique as the first major fisheries task to be learned. This 1-2 year training period in ambushi was an essential prerequisite for learning more difficult techniques, and mastering it became a rite de passage for future independent fishermen (Akimichi, 1984).

But such formal apprenticeship systems appear to have been uncommon in Japanese coastal fisheries. Most were informal, as they still are, and based on a training period within a family or kin group, whereby youngsters gradually learned and mastered the various techniques through years of on-the-job training supervised, by and in partnership with, older kinsmen and family members. After gaining sufficient experience a younger fisherman can then apply to the FCA for fishing rights. He can then work independently of his early training partner, or, more commonly, continue to work with him and eventually succeed to his rights on retirement or death. Indeed, most coastal fishing units involving more than one person in the Yaeyama FCA, as in many other areas, are crewed by a father-son team or by two or more brothers. In such cases, in many FCAs, the senior person will own the fisheries rights and be a full, voting member of the Association, whereas the other(s) will be an Associate Member (non-voting). The requisite experience to qualify for FCA membership can also be gained by crewing on a boat.

Research on present day "sea" tenure in Lake Biwa reveals that access to joint fisheries rights (JFRs) varies greatly in detail among FCAs and is strongly influenced by local historical, economic and socio-political factors, as well as by everyday face-to-face interpersonal relationships within a village. This is amply demonstrated in a comparative study of FCAs that operate under varying degrees of urban influence (and therefore of alternative full time or supplementary employment opportunities) and with variations in their level of economic dependence on JFRs (Kada, 1984).

In one urbanized FCA with relatively low dependency on JFRs many members combine fishing with jobs in the service sector. This FCA now operates two traditional fish traps (eri), one of which, in contravention of the formal rules, has been used exclusively by the same family for about a century. Although FCA members are discontent with the situation "... none dares speak up. This is partly because ... members hesitate to break the long-standing social order of the FCA, where face-to-face relationships are considered the most important." (The importance placed on maintaining the established social order among the membership is also vividly described for the Shingu FCA of Kyushu [Kalland, 1981].)

In a semi-urbanized FCA highly dependent on JFRs the allocation of rights to operate eri is decided by a Management Committee. Although in this Association the formal rules give priority in the allocation of eri rights to small families that lack the manpower to engage in net fishing, they are seldom put into practise. Instead, eri rights are usually allocated to powerful members of the FCA. One informant explained the rationale of this as: "Since a JFR is an important but scarce asset for the FCA it should be allocated to those who are skillful, who have enough capital to invest to pay the fees,and who are reliable" (Kada, 1984).

In another cooperative along the lake, this one rural and moderately dependent on JFRs, fish weirs (yana) are more important than eri. About a century ago use of this technique was allocated solely to the village paupers. With passage of the Fisheries Law (1949) the paupers became the dominant class in local fisheries (since local landowners lost their absentee fishing rights), and their village became the leader of the FCA formed from the amalgamation of the territories of four neighbouring villages.

For reasons of historical precedent, yana-fishing remains allocated to just the descendents of the pre-war pauper class. This practise is regarded as fair by that group since it represents social justice for the descendents of the paupers who had been long discriminated against. Their "subjective legitimation logic" is that "This right has been long-preserved and was succeeded to by our ancestors of this village, so that no other village could enter. In addition, this privilege cannot be extended to all FCA members within our village, either. Yana fishing has its ups and downs, it would be unfair in the long run if they participate in yana when fishing is good and withdraw when it is bad" (Kada, 1984).

Another rural FCA that is highly dependent on its JFRs for eri and yana fishing received its rights in 1098 A.D., from a shrine in the nearby former capital city of Kyoto. It is noteworthy that its present territory has remained unchanged during these 900 years, and that this territorial conservativeness has been maintained to prevent loss of its yana rights to other villages.

In this village FCA membership is not open to all residents. New residents must live there for one generation (or about 30 years) before they become eligible to apply for membership and fishing rights. Further, when a branch family is established by a son of a stem family of this village the new family must wait 10 years before it can apply for membership and rights. On the other hand, succession of stem family members to fisheries rights has been automatic through the generations. Tradition runs deep in this FCA, which maintains an exhaustive record of family lineage and succession to fishing rights.

Further, owing to a rule that originated 900 years ago with the granting of the original rights, in this village (unlike that described previously) access and succession to fishing rights was restricted only to families of higher social status. Since it remains an important symbol of past traditions the economically insignificant four-wing scoop net fishery, done in the river that flows into Lake Biwa at this village, is still reserved exclusively for descendents of the pre-war privileged families.

In the fishing villages of Lake Biwa the "subjective legitimation logic" pertaining to the allocation of JFRs, in addition to being strongly influenced by historical conditions peculiar to each community, also either consciously or unconsciously reflects

an FCA's membership's perception regarding equity and social justice. It is important to note that this reflects not just that among present day members and their families, but just as strongly -- and perhaps more so in some cases -- social justice for the ancestors and its implication for long-term reciprocity in paying off the debts incurred by descendants of former upper class families, who for centuries had discriminated against other social strata. In this the Lake Biwa region is clearly not exceptional, since a similar legitimation logic is common throughout contemporary rural Japan.

Birth-right, if followed by the requisite training and residence within the boundaries of a given FCA, is the principal means by which FCA membership and fishing rights are obtained. This is clearly demonstrated for the ambushi fishermen of Itoman, Okinawa, where those who were able to become full-time specialists in this technique belonged to a particular indigenous descent group (munchu or bara [lit. bara:"abdomen"]), of which 42 existed in Itoman in the 1920s. Ambushi fishermen belong almost exclusively to the sumu-bara descent group (Akimichi, 1984). Marrying into a community and then working with the in-laws is also another traditional means of gaining access to a fishery.

The foregoing exemplifies the condition in those Japanese fishing communities where traditional values and behavioural norms remain dominant. Conditions differ enormously in less-traditional situations, particularly in areas like the Inland Sea that have undergone massive economic structural change during the last 40 years. In a rapidly changing society, with easier access to education for all people and with a vastly enlarged range of employment opportunities than hitherto, the role of kinship in ensuring the continuity of coastal fishing has diminished. Indeed, such is the situation now that in many families younger men who in the past would have succeeded to their father's fishing rights have opted for other careers. As such, finding a successor has become a serious problem for a large number of aging fishermen. (This has now become a nationwide problem.) On the other hand this situation has increased the opportunities for persons of non-fishing backgrounds to enter the sector. This can be done legitimately (i.e., following the letter of the Fisheries Law) and crewing for (being apprenticed to) an established, older man to obtain the required fisheries experience and residency for FCA membership. Entry can also be effected by means that do not follow the letter of the law.

In the now heavily industrialized Inland Sea region, the synergyistic impacts of environmental pollution and overfishing have put a premium on the diminishing aquatic resources. This, in turn, has led to the emergence of the illicit transfer of fishing rights, in terms of the laws of 1948 and 1949. In some FCAs when a member retires from fishing he illegally sells his license to another member, at a high price. This the retiring member does by first making a financial deal with the other man and then by requesting the FCA to issue his license to him. The Association officers generally honour such requests. In fact, "...there is no

way for fishermen to escape these practises which have become well-nigh institutionalized" (Befu, 1980:333).

Befu's interpretation begs the question of whether or not such practices have traditionally been institutionalized in terms of local customary law. It is not unlikely that they long have been. Clearly, however, they should be interpreted in terms of the "logic of a [traditionally] reciprocal society" (Nakamura, 1986). Payment may be made in cash, a percentage of the catch, as a reciprocal favour, or even as political support. It is also probable that such transactions occur at various levels in the entire fisheries organization.

Clearly, facilitating, or at least not objecting to or hindering, such customary transactions would be in the best interests of the leadership of an FCA, providing that the transactions are sanctioned by the community, do not prove devisive, and particularly if they do not lead to the undue accumulation of rights and wealth by individuals -- thereby contravening the spirit as well as the letter of the post-war fisheries legislation -- since successful leadership of an Association is often acknowledged as a step towards wider political office (vide infra).

CHAPTER 3: THE INFORMAL MANAGEMENT OF CONFLICT

The history of Japanese fisheries is replete with incidents of conflict, some relatively easily and amicably solved and others to which solution was found only after outbreaks of violence and bloodshed; some have been only local-level, intra-village disputes between different factions in a fishing community or between different villages within a prefecture over access to shared or adjacent sea spaces. Others, the more important ones, have involved fishermen from two or more prefectures and have had to be resolved at the national level. Some such major incidents have had a long and continual history, going back to feudal times whereas others have been relatively short, sharp and quickly settled. The causes of these major disputes have been varied having stemmed from entry rights disputes, gear conflicts, illegal fishing, island ownership, boundary jurisdiction and institutional reform problems. As would be anticipated, the differential rates at which different communities adopted new technologies was one of the major sources of fisheries conflict. Ironically, particularly since the latter led to a great improvement in the administration of Japanese fisheries, both the 1901 and 1949 fisheries laws led to many disputes.

Territorial Behaviour and Interpersonal Conflict Management

Although legally all fisheries rights waters belong to all members of an FCA, in practise small spots within such a sea area are conceived of as temporarily belonging to an individual fishing unit. This private "ownership" within the common domain arises in several ways, all of which fundamentally function to promote equitable access to resources and to minimize and manage interpersonal conflict between or among fishing units. Some such temporary private tenure arises through the licensing by an FCA for several years of a given tract of the common sea to a particular fishing unit and for a particular purpose, such as aquaculture, or through the formal, annual exclusive award by the FCA of a specified spot(s) to a particular unit of capture fishermen for a specific target species, as in the live-bait fishery in the Yaeyama archipelago (Ruddle and Akimichi, n.d.).

But by far the commonest way in which temporary private tenure to communal sea space arises is through the exclusive use of fishing spots as a result of closely guarded personal knowled-

ge. In the Yaeyama archipelago, for example, fishermen observe that territorial behaviour and de facto "ownership" of particular fishing spots "Emerges naturally through individually-acquired knowledge and experience" (Ruddle and Akimichi, n.d.). A fisherman's knowledge and use of fishing spots is largely determined, of course, by his age and experience, by his physical abilities and capital available for investment in fishing. That in turn largely determines the technology or technologies that he customarily employs, the target species sought and therefore the locations and habitats exploited. His use of fishing spots is also determined in large part by the location where he received his early training in fisheries, his place of residence and the accessibility of a given fishing spot.

Territorial Behaviour

Fishermen in Yaeyama traditionally maintain four informal tenurial levels: fishing spots that are well-known to everybody ("the known sea"), sites regarded as personal ("the place where I usually fish"), a man's favourite fishing spot ("my sea") and a man's secret fishing spot ("concealed little sea") (Ruddle and Akimichi, n.d.). Invariably they determine the quality of a fishing spot by the size of the individual animals taken and its total yield. Perhaps of even greater importance, though,is the rate at which spots yield on a sustained basis and at which yields return to what are regarded as good levels following exploitation. Naturally, fishermen strive to know as many "good" spots as possible, since that guarantees a substantial and regular income. But possibly even more important is the breadth of knowledge, skill and experience demonstrated by constantly good catches. This enhances a man's prestige within the community and ensures him the respect accorded a master fisherman. It also guarantees that his views will be carefully considered during the resolution of conflicts within the community and that he will carry weight in inter-community disputes also.

Fishermen are faced with the fundamentally important problem of arranging the spatial and temporal allocation of their effort among the different categories of fishing spot, a technique known in Yaeyama as "allocating the sea" or "taking a small piece of the sea" (Ruddle and Akimichi, n.d.). At this there are acknowledged professionals and amateurs, since allocating the sea is a complex task that requires the balancing of a large number of fixed, cyclic and unpredictable environmental, human and social variables, which are rendered more complex by the need to take into account the efforts of competing fishermen, since other fishing units seeking the same target species and using the same technology might know, and are free to work a person's "good" or even supposedly secret fishing spots. Thus, in the face of even friendly competition between members of the same community, fishing becomes a contest of skills and wits, and is governed by interlocking sets of formal regulations as well as community-sanctioned rules of behaviour. Fishermen skilled at allocating the sea invariably attain a high rate of success for effort expended. This, too, serves to enhance their prestige within the

community.

By not revealing information verbally and avoidance behaviour Yaeyama fishermen preserve their secret fishing territories. The location of favourite or secret fishing spots is never revealed. Only generalized information about "good" fishing spots is given even to relatives or very close friends, and then only when a man is about to retire or has already done so. Sons who work regularly with their fathers inherit this information throughout the many years of on-the-job training during their joint working life, whereas sons who work separately are not so instructed, since, depending on intra-family relationships, they might form part of the perceived competition.

This issue is intimately bound-up with pride and notions of self-esteem among fishermen, and therefore again with a man's status within the fishing community, and all that arises from it. It is asserted that no self-respecting fisherman would ever ask "...such a foolish question" as where another man had fished on a particular day, since a competent man can tell immediately where another had worked simply by looking at the composition of his catch. Further, it is noteworthy that fishermen themselves are careful not to be noticed appraising another person's catch. Rather, they send their wives to hang around chatting at the harbour or the FCA wharf, where they can peek at a competitor's catch as it is being unloaded, weighed and carefully boxed for air-freighting to the central fish market.

Techniques for Minimizing Conflict

Among Yaeyama fishermen several customary techniques are employed to ensure that the likelihood of interpersonal conflict is avoided or at least minimized. Among these the most important are avoidance behaviour on the sea and the acknowledgement of the rights of a first-comer to a particular fishing spot.

Among Yaeyama fishermen a moderately competitive attitude towards others employing the same technology stems from the common desire to avoid being perceived of lazy. Prouder and more successful men are motivated by the desire to be known as a "capable man on the sea," in other words a leading fisherman whose skill, knowledge and capacity to "allocate the sea" are continually demonstrated through regular and frequent fishing trips and his constantly good catches (Ruddle and Akimichi, n.d.).

Competition is intense among Yaeyama fishermen. However tempting it might be, this should not be interpeted as an early symptom of the anomie that has been described as rampant among fishermen in other parts of Japan, such as in the Inland Sea, where crowding of inshore waters, pollution, inter-sectoral conflicts and, possibly, over-fishing undermine the huge fishing effort expended (vide infra). Rather, in Yaeyama, as in many

other less-heavily fished parts of Japan, competition stems more from the use by different fishermen of different gears, such as fixed nets and gill nets set in close proximity to one-another and aimed at the same target species. The use of incompatible technologies compounds and confuses the notion of competition.

In Yaeyama, although still severe, competition to a large extent still takes such basically harmless forms as aquiring the first-comer's rights to a "good" fishing spot on the opening day of a particular fishing season, such as that for gill netting. Such competition is intense because the next man to fish that spot, perhaps on the next day, can expect to obtain only 25-30 percent of the first-comer's catch.

At sea avoidance behaviour is practised assiduously whenever there is the slightest chance of inadvertantly revealing the location of a "good" secret spot. Such behaviour takes two main forms, ceasing all activities and leaving a spot rapidly when another boat is seen approaching the general area, and not continuing towards a pre-selected spot and diverting to another location, if is apparent that another fisherman has already reached the general vicinity of one's spot.

Since the tenured waters of an FCA are the common property of all the Association's members, it follows that there is nothing legally sacrosanct about an individual's secret or favourite fishing spot. Apart from those places specifically allocated to individual fishing units for particular purposes, any spot can be used freely by any fisherman.

In Yaeyama (Ruddle and Akimichi, n.d.) and off the main island of Okinawa (Akimichi, 1984), and most likely in many other places too, the priority right to a fishing spot by a firstcomer is absolutely sacrosanct. Again, there is nothing in the formal law to uphold this right, but it is ironclad in customary law. The first man to reach and work a particular spot "owns" that location until he packs up and either returns to port or moves elsewhere. The duration of "ownership" varies according to the technology employed: e.g., overnight for gill netting, up to several weeks for the operation of a fixed net, or just a matter of a few minutes for a cuttlefish spearer. This rule applies within and among all types of fishing.

In some places, such as off Itoman, on Okinawa Island, spots for temporary fixed nets are selected and marked by individual fishermen on the previous day. Once so marked, they cannot be used by another fisherman employing the same technique (Akimichi, 1984).

The Informal Resolution of Interpersonal Conflict

Conflicts tend to occur fairly frequently within an FCA but

their impact is mitigated by the fully participatory consensus approach to decision-making that is characteristic of Japanese organizations (Vogel, 1975). Neither squad nor group leaders nor the directors of an FCA have authority to make decisions on behalf of the membership. Policy and other major decisions are always made at meetings where everybody involved is in attendance and which are governed by the normative objective of attaining a consensus that embraces the interests of all concerned, rather than a simple majority approval. Decisions made otherwise are unacceptable. Such meetings are essentially negotiations that involve concessions and counter-concessions, compromises and the accommodation of various interests. They may be protracted and extend over several weeks until a consensus has been achieved. This process has been well-illustrated for fishing communities in Kyushu (Kalland, 1981) and Hokkaido (Short, n.d.), and is characteristic of Japanese decision-making in general.

Although a rare occurrence, since the "first-comer priority rule" is ironclad and upheld by both customary rules and Coast Guard regulations, some more aggressive fishermen attempt to intimidate others into leaving a "good" fishing spot at which they have arrived first. Physical violence is not the common result, but if such behaviour is repeated the help of an influential and respected third party is sought to resolve the arguement and settle the conflict. Community opinion and peer pressure will be brought to bear on the offender, since the first-comer is always supported. Only rarely and in extreme cases of repeated intimidation will the assistance of the Coast Guard be sought.

An intermediary and peer pressures are used to resolve informally a variety of other relatively minor conflicts. For example, resources are "siphoned-off" when a gill netter sets his net to intercept fish that would be otherwise caught by another man's fixed net. Some gill netters interprete this as a practical means of obtaining recompense, since fixed nets are incompatible with other technologies and those employing them infringe official rules because they fail to relocate their nets as regularly as specified by prefectural regulations. Since both parties are behaving improperly, the gill netter by violating the first-comer's rights of the fixed netter, and the latter by leaving his nets in place too long and therefore not freeing the area for the gill netters to operate efficiently, neither party usually voices a serious complaint. But when such territorial behaviour persists over a long period a sense of general unpleasantness develops. If the two contending parties alone are unable to settle their grievance the community renders assistance by providing a mediator, and by exterting pressures on the contending parties to "behave properly."

Handling Theft

Outright theft or deliberate damage to another person's gear is a more serious problem. In the Yaeyama archipelago, although evidence is scanty and mostly hearsay, spear fishermen who work at night using flashlights as well as non-fishermen who swim out

from the shore are widely considered to steal fish from nets and traps. Stolen fish can be easily identified by the alert fisherman since those pulled carelessly from the gill net have their heads torn off. Further, non-gill netters who attempt to sell gill-netted fish can be easily identified because fish caught in a gill net show evidence of this by marks on the scales around the gills. The composition of a night spearer's catch also discloses whether he has been poaching, since usually he can spear only animals, such as parrotfish (Scaridae), that sleep at night among the corals. If, however, his "catch" includes a large number of nocturnally-active species, such as emperors (Lethrinidae), which are difficult to spear when swimming, then theft can be suspected.

Gill nets are obvious targets for poachers, since they are marked at night with flashing lights. Usually the gill netter sets his net at dusk and returns to port. Next morning he goes out to haul the net. But the astute fisherman turns-off the lights and stays on the sea overnight, partly to guard his net. Occasionally thieves cut the gill net to remove the fish more carefully. Bottom lines are also raided by poachers during the spawning seasons of emperors and sea bass (Epinephelus spp.).

The records of the Coast Guard in Yaeyama show no cases of theft because theft or deliberate damage to gear is either ignored or, in more flagrant or repeated cases, handled by the community without recourse to the law. Community mechanisms are employed to reach an agreement between the victim and the culprit and to fix a level of monetary compensation.

Successful fishermen, who have no need to steal to secure a livelihood and whose good fishing reputation is already established, modestly assert that even a good fisherman has within him the potential to steal, and were it not for his own pride he could perhaps succumb to the many opportunities to do so when at sea. While such men look down on thieves there is at the same time a tendency to pity a man who is so lacking in fisheries skill that he has to lower himself to stealing. Generally his shame when caught and loss of face are regarded as punishment enough. Not unexpectedly this sense of tolerance declines markedly when a man is repeatedly victimized, at which point a mediator intercedes and community pressures come into play. Social ostracization is the severest penalty imposed by the latter on an unrepentant thief

The Formal Resolution of Interpersonal Conflict

When time-honoured, informal community mechanisms prove inadequate to resolve a particular conflict more formal, yet still informal, channels are resorted to. In their study of Yaeyama fishermen Ruddle and Akimichi (n.d.) have termed this the "Informal Court of Last Resort."

This procedure can be exemplified for Yaeyama fishermen by the conflict over sites for lift netting for live bait. Live bait

fishing is one of the most important fisheries in Yaeyama since on its success depends the seasonally important bonito fishery and employment in local factories that process bonito. Lift netting for live bait is thus a critical activity that depends on the skillful exploitation of small fishing spots by an experienced and knowledgeable leader of a small group of men. As a consequence of the high level of community economic dependence on the lift netters, and particularly on their leaders, such men enjoy a high status and important role in the community. Since this fishery is of such crucial importance it is nowadays strictly regulated via an agreement drawn-up by the Yaeyama FCA and by a lottery process that annually re-allocates registered fishing spots for live bait among the lift netters. Access to this group is strictly limited to experienced bait fishermen.

Until just over a decade ago no formal regulations were applied to this fishery, and as a consequence there was considerable discord over the use of fishing spots. A basic problem is that some spots are close to others with which they are intimately linked by fish behaviour, in that according to the phase of the diurnal tidal cycle fish move between the two spots. Lift netting groups with first-comer rights to a particular spot claimed that their right was being infringed upon by other groups that had decided to work the adjacent and related spots at the same time, and therefore were, in effect, stealing the first-comer's fish.

This inter-group problem occurred frequently and without satisfactory resolution, such that it was eventually taken-up by the "Lift Netting Squad," an organization confined to lift netters that is regarded as formal within the FCA membership but is informal within the official hierarchy of fisheries administrative institutions. Since the squad ("The Informal Court of Last Resort") was unable to resolve the problem it was eventually taken before the FCA Executive Board, and its solution was finally accepted by the Annual General Meeting of the FCA, which included all the lift netters. The outcome was the acceptance of a "Formal Agreement on Bait Fisheries for Bonito" and the institution of an annual lottery for the re-allocation of registered lift netting spots among all the lift netting groups. In terms of fishermen's behaviour the important points of this agreement are: That for the first season only, or for as long as fish remain there if for less than one season, the right to exploit a newly discovered lift netting spot belongs to it discoveror; non-registered spots, which are freely exploitable for lift netting, can be worked for only two consecutive days by the same fishing unit; poachers must give-up their catch to the unit to which the spot is registered for the year; fishing units cannot exchange spots among themselves; and units not using their allocated spots forfeit the use right to other units.

CHAPTER 4: THE FORMAL RESOLUTION OF CONFLICTS

Unlike the Yaeyama archipelago and similar still essentially rural areas, in such parts of Japan as the Inland Sea, where customary sanctions and community mechanisms for conflict resolution have broken down in the face of modernization or as a consequence of a greatly increased fishing population, competition among fishermen -- in a great many instances motivated more by economics than pride -- is intense and the disregarding of official regulations and law-breaking more frequent and flagrant. In some areas the incidence of criminality and litigation among fishermen is relatively high, as are conflicts among FCAs, between prefectures, and among different sectors of the national economy in general. Under such circumstances most conflicts are resolved by formal means.

The Formal Resolution of Local Fisheries Conflicts

In such isolated areas as the Yaeyama Islands, as demonstrated in Chapter 3, most problems and conflicts are still resolved by informal mechanisms within the fishing community. Flagrant infringement of prefectural and FCA regulations is relatively rare, judging from Coast Guard records, although there is no way of knowing what percentage of illegal activities escape detection. It is noteworthy in this respect that both fishermen and the Coast Guard report that fishermen themselves sometimes inform on their peers who engage in illegal activities. In some cases this could be interpreted as an element of competitive behaviour. Apprehended law-breakers are fined by the authorities and the worst or repeat offenders suspended from fishing. In Okinawa, and especially in remote Yaeyama, as in many other parts of rural Japan, the threat of suspension alone is a major deterrent to would be law-breakers, since alternative jobs are scarce in the narrowly-based economy, especially for men whose formal education ended with middle school.

Coast Guard records reveal that among Yaeyama fishermen the commonest illegal activities are gill netting during the summer closed season -- violators are easily apprehended since this activity is not readily concealed -- with one case recorded in 1977, seven in 1980 and four in 1981. Twenty instances occurred of taking spiny lobsters during the 1976 closed season, but none subsequently, as did three cases of exploiting coral without a licence. One case of "dynamite" fishing and 19 cases of using arsenic as a piscicide were recorded in 1977. No illegal activi-

ties were detected in either 1978 or 1979.

An emerging but still relatively minor activity in Yaeyama is the incompatibility between certain fishing technologies. Particularly problematical are the fixed nets operated by six fishing units. According to an FCA regulation these nets should be relocated weekly, but in practise this is ignored. As noted above, conflicts with gill netters are quite common, since both technologies utilize the same sites, and, in addition, neither squid trolling or fish driving can be conducted where fixed nets have been emplaced. The same problem in waters off the main island of Okinawa resulted in the prefectural government banning the use of fixed nets in those waters from July, 1982. But since the number of fixed net operators in Yaeyama waters remains small the problem should be amenable to solution either by enforcing the existing regulations pertaining to weekly relocation, or via the fishing community's informal mechanisms that might, say, reserve specific sites for fixed netting only. However, if the informal mechanisms fail to find a solution -- as in the case of the bait fishery -- the FCA will certainly be called upon by users of other technologies to enforce its rule. And should the number of entries to fixed netting, in particular, increase, then the possibility of an outright ban, as off Okinawa Island, is not unlikely.

During the 1940s and 1950s, in waters near the Inland Sea village of Takashima, Okayama Prefecture, occasional small-scale poaching and the robbery at sea of returning fishing boats was reported. Such offences were reported both to the local police and to the Coast Guard. Fishermen themselves sometimes apprehended the culprits and turned them over to the authorities (Norbeck, 1954).

Befu (1980) observes that despite 70,000 fishermen operating in the Inland Sea only 1,529 arrests for breaking fisheries regulations were made in 1975, a mere 2 percent of the total number of fishermen. Of these, 1,256 were for fishing without a permit, 132 for fishing during a closed season, 128 for using prohibited gear, and 13 for miscellaneous violations. It is noteworthy that district officers estimated that the authorities apprehended only some 10-20 percent of all violators, owing largely to a lack of resources to fulfill all their maritime duties and a higher priority given to other tasks.

One of the consequences of heavy industrial pollution in the Inland Sea has been the tainting of fish, which then become unsaleable. As a result of the protests of fishermen who operated in Mizushima Bay, for example, local government and industry established a fund to purchase such fish. This, of course, provided a splendid opportunity for unscrupulous fishermen to dispose of as unsaleable perfectly good fish that they had failed to sell, for 70 percent of their market price (Befu, 1980). Other such opportunities have arisen, thwarting the good intentions of government. For instance, certain highly polluted waters in Mizushima Bay are now off-limits for fishing, since the

government bought up all the fishing rights. "This, however, has not prevented some fishermen from sneaking into this area, occasionally mixing the fish caught there (easily, since no one fishes there any more) with perfectly good fish and selling them to unsuspecting wholesalers" (Befu, 1980:339-340).

Conflicts beyond the scope of an individual FCA to resolve, but within a single prefecture, metropolis or fisheries district of Hokkaido, are taken before the Sea Area Adjustment Commission, whose decision is binding.

Formal Resolution of Higher Level Fisheries Conflicts

An encyclopeadic treatment of the history, decision-making processes and outcomes of scores of such conflicts has been made by Kaneda (1979), and the so-called "Seven Greatest Fisheries Incidents in Japan," drawn from that compilation, has been published by Matsuda and Kaneda (1984). Three of those incidents are summarized here to illustrate the kinds of major inter-prefectural fisheries problems that have arisen, their historical and social context, the procedures employed in conflict resolution and the solutions that have been adopted.

(1) The Kyuroku-to Incident: Jurisdiction over Reefs and Islets

A classic example in Japan of this type of fisheries dispute is the Kyuroku-to incident. Kyuroku-to is a reef located in the Sea of Japan off the boundary between Aomori and Akita prefectures, in northern Honshu (Fig. 5). The reef is a group of three rocks that, depending on the tide, is either submerged or emergent. Several times both Aomori Prefecture and Akita Prefecture sought sole fisheries jurisdiction of the reef. In 1891 the former unilaterally declared both the ownership of Kyuroku-to and sole jurisdictional rights to the fisheries area surrounding it. Akita objected and was upheld by the Meiji government, which forced Aomori to withdraw its claim and to negotiate a management plan with Akita for the reef area. An acceptable solution was reached in that both prefectures independently granted licenses to their own fishermen to operate in the waters around the reef. Aomori Prefecture established demarcated fisheries rights there for abalone and conch fishing in 1929 and set net rights in 1934. Akita Prefecture licensed its own fishermen to collect abalone and conch and later to use set nets at about the same times. Nevertheless, both prefectures continued to seek exclusive fisheries rights to the area, and the central government rejected their proposals in 1928 and 1929.

Following World War II the waters around Kyuroku-to became an important area for the purse seining of Akta mackerel, and incidents between fishing units from the two prefectures increased in frequency and severity. Further, at about the same

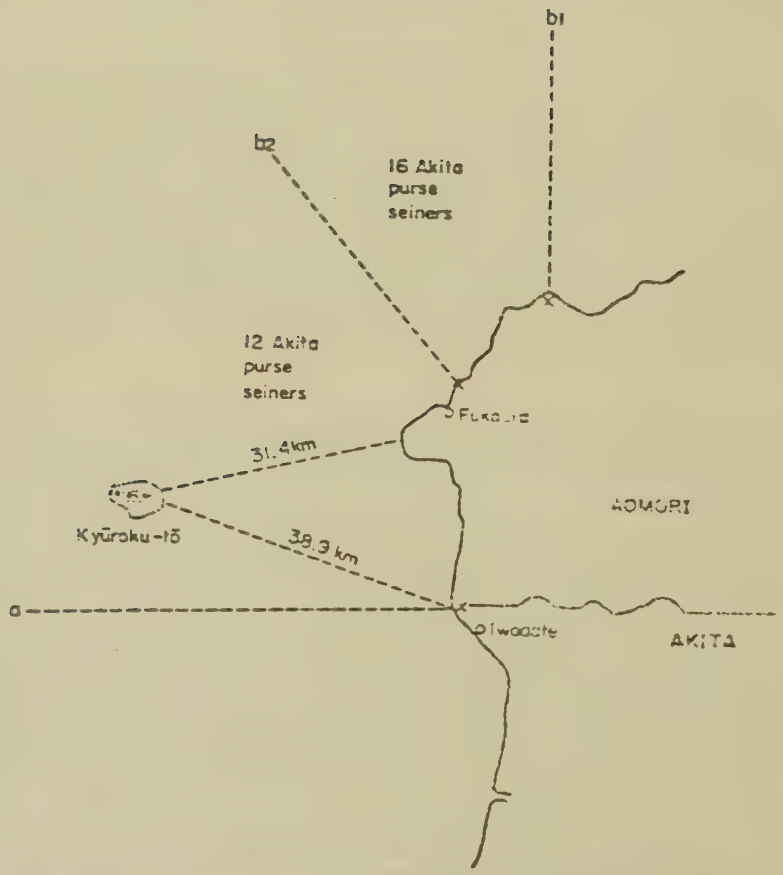

Figure 5. Mediation Map of the Kyūroku-tō Fisheries Incident
a: Direct westward extension of the boundary between Aomori and Akita prefectures; b: Outer limit of Akita mackerel fishing by Akita fishermen (agreement reached on April 22, 1953)

time, the passage of the 1949 Fisheries Law required that both prefectures propose fisheries management plans for their fishing grounds.

Aomori announced its first fishing grounds utilization plan according to the new law in the summer of 1951. Under that plan the waters around Kyuroku-to were included in its common fishery right area. Shortly thereafter Aomori went further in asserting its claim by registering the ownership of Kyuroku-to fishing rights to the fishermen of its own Fukaura District.

Akita responded by lobbying the Ministry of Agriculture, Forestry and Fisheries requesting that the exclusive rights to Kyuroku-to be awarded to Akita fishermen, who, it claimed, depended more on fishing in those waters than did the men from Aomori. While the Ministry was investigating the claim, Akita also unilaterally declared ownership of the area, which it registered to the Iwadate Village FCA. Under these difficult circumstances, at the end of 1951, the Ministry became involved in unsuccessful mediation between the two prefectural governments.

In the meantime the cabinet of the central government concluded that under existing law unregistered rocks or islets could not be registered to any one administrative unit, and that pending resolution of the conflict the waters of Kyuroku-to were under the direct jurisdiction of the Ministry, based on Article 136 of the 1949 Fisheries Law. Although this conclusion was announced to the governors of both prefectures in late-December, 1951, the governor of Aomori nevertheless chose to ignore it. He went ahead and issued licenses on January 1, 1952 to Aomori fishermen. In response the cabinet invalidated Aomori's fisheries management plan together with the prefectural fishing licenses. Akita Prefecture, on the other hand, accepted the cabinet's decision.

By the middle of the following year the central government revised the Local Autonomy Act to ensure that in future the cabinet alone would determine the registration to local administrative units of unregistered areas. Further, it was also concluded in March, 1953 that a special law was required to obviate such acrimonious disputes. Under that law, in cases like Kyuroku-to the Ministry would have sole jurisdiction, in lieu of prefectural governors, over all problems associated with fishing licenses and the like.

Eventually, during 1953, the problem was solved through legislative procedures of the central government. In July of that year a memorandum, based on Article 136 of the Fisheries Law (1949), was signed by the governors of both prefectures and the Ministry. It granted licenses to fish in Kyuroku-to waters in August, 1953. This was complemented by the Special Fishery Right Treatment Law Concerning Kyuroku-to, enacted in August, 1953. Then, based on a revision to the Local Autonomy Act, the central government registered Kyuroku-to to Aomori Prefecture, in October, 1953.

(2) The Ariake Sea Incident: A Territorial Dispute

The Fisheries Law of 1901 required that all prefectures codify their fishing grounds for the issuance of licenses for prefectural exclusive fishery right areas. No problems arose in areas where coastal waters could be clearly assigned to a single administrative unit, but serious incidents arose in areas such as the Ariake Sea, in Kyushu, in which fishermen from both Saga and Fukuoka prefectures operate. As a consequence of the claims and counter claims based on historical precedents that arose from the need to define exclusive fishing rights territories according to the 1901 law, numerous fisheries incidents and fighting with bloodshed occurred between small groups of fishermen in the Ariake Sea during the period 1902-07. Direct negotiations between the two prefectures' fishery administrations were in vain, so the Ministry stepped in and successfully concluded an agreement in mid-1908 (Fig. 6.1).

With the post-WW II change in fisheries administration, Fukuoka Prefecture claimed, in April, 1951, the boundary line ae in Fig. 6.2, whereas Saga Prefecture insisted that the original boundary (ac) be maintained. Ignoring Fukuoka's claim, Saga announced its own common fisheries rights area management plan in May, 1951, based on the 1949 Fisheries Law.

Fukuoka protested Saga's action and announced its own plan two months later. As a result of these conflicting management plans some fishing grounds in the Ariake Sea became jointly claimed by both prefectures. This situation was untenable, so in late-1951 the Fisheries Agency of the central government stepped in to mediate.

During this mediation Fukuoka Prefecture invoked the basic philosophy of the 1949 Fisheries Law by claiming that its fundamental intent was to democratize fisheries with the dual objective of increasing fisheries production and improving the welfare of fishing communities. Based on this, Fukuoka claimed that under the conditions prevailing before the enactment of the new law its fishermen working in the Ariake Sea without enjoying exclusive fisheries rights had been forced to pay to absentee Saga fishery rights owners unreasonably high entry fees, and had also suffered from unstable incomes. Fukuoka charged that by such means absentee Saga fishery rights owners, who possessed neither boats nor gear, had exploited poor Fukuoka fishermen, who, in order to make a meagre living had had no alternative but to accept the onerous conditions imposed by those Saga rights owners. Thus according to both the spirit and letter the of the new 1949 Fisheries Law the fishing grounds in the Ariake Sea should be opened only to these working Fukuoka fishermen and that the absentee Saga rights owners should be totally excluded.

Further, Fukuoka Prefecture claimed that the 1908 agreement between the two prefectures had been maintained at a cost to Fukuoka fishermen, who, in terms of catch size and working fishing units, had a much larger involvment and interest in the

1. The 1908 agreement (1908-1956)
2. Fukuoka's proposal in 1951
3. The 1956 agreement (1956-present) Shaded area : Directly controlled by the Minister of Agriculture and Forestry

Figure 6. Mediation Map of the Ariake Sea Fisheries Incident

ab: Outer limit for Fukuoka fishermen; ac: the boundary;
ad: Outer limit for Saga fishermen; and ae: proposed outer limit to Fukuoka fishermen for free fishing.

claimed area (surrounded by lines a,b,c in Fig 6.1) than did Saga fishermen. And since the exclusive fisheries rights area of Fukuoka Prefecture in the Ariake Sea was only about one third the extent of that of both prefectures combined, the Fukuoka fishermen depended for a large percentage of their livelihood on catches made in the Saga exclusive rights area. In fact, Fukuoka men had utilized 90 percent of the claimed area. Thus, Fukuoka's petition concluded, the outer boundary for Fukuoka fishermen was unfair and should be changed to line ae.

Saga Prefecture countered with the claim that the 1908 agreement had been concluded after a thorough consideration of pre-existing conditions, and, since order had been maintained in the Ariake Sea fisheries during the ensuing 40 years and fishermen from both prefectures had without serious incident established good fishing grounds in the area, that there was no valid reason to alter the existing situation. Further, since the changes proposed by Fukuoka Prefecture directly threatened the livlihoods of Saga fishermen, Saga Prefecture could not accept them.

Saga Prefecture proposed to solve the problem by concluding an open access agreement between the two prefectures, based on the perceived greater dependency of Fukuoka fishermen than those from Saga on the area under contention. Further, Saga contended that its claim was the stronger since it had improved productivity of the shellfisheries of the area via its aquacultural endeavours, and that it had promoted resource conservation via managing orderly operations in the natural spawning and nursery grounds, thinning-out overly abundant juvenile shellfish, conserving fish fingerlings and undersized shells, and by limiting the fishery in several ways.

The claims put forward by both sides were reasonable and based on sound evidence. In consideration of that the Fisheries Agency mediated the agreement made in 1952 whereby the exclusive fisheries rights territories of both prefectures were separated by a central tract that was henceforth to be controlled directly by the Ministry (the shaded area in Fig. 6.3). From that time, fisheries rights to that central area have been issued to fishing units from both prefectures by the Ministry, and had been renewed without incident a total of 6 times by late-1983.

(4) The Essa Strait Incident: A Problem of Technology

The history of trawling in Japanese coastal waters is one of recurrent and acrimonious disputes with other fisheries sectors. Typical of this is the Essa Strait Incident. Since the introduction of a trawl fishery, in 1919-21, severe conflicts have continued between trawlermen and traditional anglers and long liners in the Essa Strait, off Niigata, on Honshu Island. These conflicts, often violent, were exacerbated by the implementation of the 1949 Fisheries Law. The trawlermen claimed open access to areas closed to them, based on the democratic and rational management principles embodied in the Fisheries Law, whereas the

traditional fishermen have continued to insist on the maintenance and protection of their traditional rights in coastal waters.

In an attempt to resolve the conflict, the Fisheries Agency of Niigata Prefecture coordinated the mediation efforts of both the Northern Regional Fisheries Mediation Committee, which represented the trawlermen and the Central Regional Fisheries Mediation Committee, representing the traditional fishermen. But mediation failed because of the diametrically opposed and tenaciously held views of their respective constituencies.

In March, 1950 Niigata Prefecture proposed a compromise whereby small trawlers would be permitted to work in the inshore waters only during the winter season, thereby partially opening the exclusive right fishing grounds. But the traditional fishermen rejected this plan. The prefectural fisheries office then turned over the problem to the national Fisheries Agency.

Attempting to force a solution, in November, 1950 twenty trawlers fished illegally in the areas closed to them. Anticipating major chaos and an escalation of the conflict, the Agency temporarily permitted trawling in the closed area during that winter. But since the traditional fishermen protested vigorously, the Fisheries Agency rescinded is trawling permit three days after it was issued. However, the trawlermen ignored the later order and continued to operate under the authority of the temporary permit.

In the meantime lobbyists representing both sides worked for a solution with the central government. The Minister of Agriculture, Forestry and Fisheries imposed an absolute ban on trawling in the Essa Strait until a mutually acceptable agreement could be concluded between the two sides. No such agreement has ever been reached.

The Formal Resolution of Inter-Sectoral Conflicts

Another major source of fisheries conflict in postwar Japan has been that between fisheries and other sectors of the national economy, most notably industry, transportation and public services. The traditional methods of mediation, conciliation and, to a lesser extent, arbitration, which have a long legacy in Japan, are also those preferred to settle this category of formal dispute. Further, the Dispute Law (1970) essentially represents a modernized version of these traditional methods (vide infra).

Inter-sectoral conflicts are in essence a symptom of a much larger rural-urban dichotomy in Japanese society, with the generally parochial worldview of the former conflicting with the relatively cosmopolitan and global perspective of the latter. Although traditional means of conflict management remain the favoured methods in rural and urban society alike, the former cleaves to them more closely. In a rapidly changing society like

present day urban Japan many traditional values and behaviour patterns may be cast aside. Thus management of any conflict that arises between entities such as industry, that represent the urban (modern), and fisheries, that represent the rural (traditional) sector, becomes complex. Traditional processes are sometimes neglected, and atypical conditions become imposed on the process of finding a solution.

Thus in the late-1960s the traditional vehicles of conflict management were supplemented by resort to the judiciary, when, as a consequence of industry's neglect of basic traditional behavioural norms of the rural sector, some particularly intractable cases were brought before the courts for settlement. Although still not a widely accepted method of resolving conflicts, owing in large part to the legacy of intra-community strife that it uncommonly heralds, judicial solutions are occasionally sought to fishery problems. But such cases remain relatively rare, and most conflicts are managed at the local level, by traditional methods.

Nevertheless, the judiciary has, via some landmark cases, had an important role in defining certain classes of rights as they pertain to fisheries management. These must be viewed within the context of the citizens' anti-pollution campaigns, since certain rights of fishing communities were largely challenged and confirmed through inter-sectoral conflicts over the pollution of resources and the loss of resource space.

Inter-sectoral conflicts that involve coastal fisheries have arisen in Japan because of the intense post-war concentration of heavy industry, housing, agriculture and communications in constricted coastal plains and on land reclaimed from shallow inshore waters. Until the 1960s industrial growth and economic progress were virtually sacrosanct and negative impacts were regarded as their unavoidable concomitants. Thus many legitimate grievances were ignored, including those of fishing communities whose prime fishing grounds were being degraded by industrial and domestic effluents or lost to reclamation.

Those attitudes changed dramatically during the 1960s, largely as a consequence of the diasterous impact on human health of "Big Four" pollution incidents (minamata disease [mercury poisoning] itai-itai disease [cadmium poisoning] and various pulmonary disorders), together with the tactics of industry and government to avoid responsibility. By the 1970s the morality of industrial growth at the expense of citizen and community welfare and rights was being increasingly challenged.

As is well-known, by 1968 minamata disease was officially attributed to methylated mercury, which when continuously discharged into coastal waters accumulates in marine organisms and their consumers. Since fishermen and their families were the principal regular consumers of marine products around Minamata Bay this was the segment of the population most affected. Those who contracted the disease suffered disasterous physical and

social consequences.

The attitudes of Japanese society were changed by this tragedy and especially by the stance of the polluter and the government, who failed to take the traditional approach of offering relief and solace to the victims. Particularly deplorable was the polluter's persistent denial of responsibility and use of legal tactics to prevent relief. Poor fishermen could hardly match the financial and intellectual resources of industry, and when they sought help from the local government they were rebuffed for years by an administration that sometimes sided with the polluter. But a wide range of citizens' groups gradually rallied to the victims' cause, from which the citizens' environmental protest movements emerged (McKean, 1981). Undoubtedly the most important among them in urging the victims to seek redress from the courts were the lawyers' groups, who apart from questions of conscience and social justice wanted to use the judiciary for their own ends to shape long-term national environmental policies.

Use of the Judiciary in Fisheries Conflict Resolution

Whereas the victims of minamata and other pollution-related diseases initially favoured the time-honoured method of mediation to resolve the conflict, because of the non-traditional behaviour of the polluters and the government they gradually came to distrust this traditional vehicle, and, instigated by their lawyers, in the late-1960s turned to the judiciary. The principal reason accounting for this radical shift from traditional processes was that the chemical company had so abused the process that mediation could no longer be trusted to render a just solution. A large and powerful company could easily gain control of the process and therefore could dictate the terms of the settlement. Further, whereas fishermen could do little to influence the selection of mediators a powerful company could do -- as had been demonstrated -- much to gain an advantage.

Also of major significance in the decision to forego the use of traditional mediation was the realization that the situation had become completely atypical and totally divorced from traditional precedent. The plaintiffs realized that they could only successfully take on the "modern" sector if they too discarded traditional techniques and adopted "modern" tactics. They gradually realized also that in this case traditional mediation weakened their cause, since it sought harmony and mutual concession, whereas the plaintiffs wanted a final showdown.

Another traditional objective of mediation was preservation of community integrity. But in the minamata case that had long since vanished. Further, since discords continued to fester indefinitely when blame is assigned totally to one side, traditional mediation procedures avoided adjudicating responsibility or cause of injury. But after suffering many years of indignities, together with the discarding of traditional procedures by the

chemical company, the plaintiffs demanded clear-cut assignation of guilt. Since such a demand could not be satisfied by traditional mediation, there remained no choice but to use the judicial process. As is well-known, the plaintiffs of the "Big Four" pollution cases won court victories and then proceeded to negotiate acceptable monetary compensation with the polluting companies.

But the contribution of the judiciary in establishing alternative processes of dispute settlement goes way beyond those immediate decisions. Although traditional methods of conflict resolution remain those mainly employed by fishing communities to settle disputes, recourse to the courts is now no longer unheard of. Since the Minamata case, in particular, judicial proceedings to protect inshore fisheries rights have largely taken place within the broader context of environmental protection.

Verdicts in those four major cases broadened the concept of "citizens' rights" by showing that it is not the duty of a responsible citizen to suffer pollution silently for the national benefit, but rather that it is a transgression of justice. The rights violated in the "Big Four" pollution cases were those related to health and rights related to property. In terms of fisheries management the latter pertained to fishery rights in waters that had become polluted. These were amplified in the second and third generation of environmental court cases.

The second generation cases enhanced acceptance of an interlocking set of associated rights within the concept of "personal rights", a term that does not appear in the Civil Code but which is gradually becoming accepted as a "protected interest" if not a full statutory right (Gresser et al., 1981). Closely related is the notion of livelihood rights. In 1971 the Oita District Court decision in favour of Usuki fishermen demonstrated that fishery rights have a value beyond economic worth, i.e., that more than just property rights they constituted rights to a livelihood (vide infra), as did the opinion of the court concerning the Date and Usu FCAs' complaint in their case against the Hokkaido Electric Power Company (Gresser et al., 1981).

Based on those formal legal precedents establishing the right to compensation for various categories of fisheries rights infringement, injunctive relief was then sought to halt unwanted local developments that could potentially infringe on those rights. In this way, the Ushibuka human waste treatment facility was prevented by the residents of three fishing villages in Amakusa, Kumamoto Prefecture, Kyushu.

The plaintiffs were 67 fishermen resident in Amakusa and the defendent was Ushibuka City, which had planned the waste treatment plant and which since 1971 had purchased land near the residences of the plaintiffs for its construction. The fishermen opposed construction since the city had admitted that the plant would not treat all the waste and three percent of the BOD would be released untreated into the sea. The plaintiffs contended that

currents and tides would carry this untreated effluent along the coast, with potentially serious consequences for the health and livelihood of the residents. Since the potential injuries would, the plaintiffs argued, exceed the limits of their endurance and would violate their fishing rights, possessory rights, rights of ownership, rights of human dignity and environmental rights, they requested a court injunction to prevent the planned construction. The injunction was granted (Gresser et al., 1981).

Several precedents of the use of court injunctions to prevent undesirable infrastructural developments having thus been established, the third generation of environmental law cases moved to deal with the issues of prior notice, access to information and the right to hearings. Several court cases have established precedents for fishing communities on these issues too.

One was that established by the Matsuyama Airport case. In the late-1960s the governor of Ehime Prefecture, in Shikoku, granted a permit for the reclamation of inshore waters for runway construction. This was appealed to the Matsuyama District Court by 73 fishermen of the Okaga-Yoshidahama FCA, who possessed fishing rights to the reclaimed and other areas. They claimed that 20 of their members and their families based their fishery activities mainly in the reclaimed and associated areas. Thus the reclamation would irrevocably damage their livelihood and should be suspended. The court ordered that approval of runway construction be suspended since the governor had not given prior notice and a chance for a public hearing before granting approval for the reclamation, as required under article 35 of the Constitution. His action was therefore illegal.

In addition to being precedent-setting, the Matsuyama Airport case also prompted the government to amend, in 1973, the Public Surface Waters Reclamation Law to provide minimum procedural safeguards for fisheries rights, via the issuance of a public notice of applications for land reclamation permits, making public the relevant documents, and permiting time for written responses from interested parties. As progressive as these amendments may at first appear, they have been criticized as a mere gesture. Since decisions have usually been made in advance of public meetings, which few, if any, politicians bother to attend, such hearings are only a formality (Hase 1981).

The Modernization of Traditional Methods of Dispute Settlement

Although judicial procedures have provided a complementary alternative adapted to a changing social context in which traditional behavioural norms have broken down, as the earlier environmental pollution cases reviewed above have demonstrated, Japanese society traditionally favours the use of extra-judicial methods to settle disputes. Based on that rich historical experience, in 1970, the traditional methods of mediation and conciliation were adapted to the modern context and applied to the requirements of environmental regulation through the Law for the

Resolution of Pollution Disputes (hereafter referred to as the "Dispute Law"). This measure has been used by some fishing communities as an extra-judicial method of settling disputes that arise from the pollution of fishing grounds.

Despite the varied motives of those in support, the need for legislation such as the Dispute Law became widely apparent in the late-1960s, following the "Big Four" pollution cases: A less socially disruptive and familiar alternative method for settling disputes was appreciated in official circles, and plaintiffs favoured an alternative that provided quicker relief than could the judiciary. Further, owing to the inherent complexities and difficulties of the issues involved, it was thought that a more appropriate institution than the judiciary ought to be established to resolve pollution disputes. This was widely believed since individual polluters were often difficult if not impossible to specify, and pollution, the causes and impact of which were often scientifically obscure anyway, commonly extended over a broad geographical area in which it involved a wide range of communities and their livelihood patterns in an equally varied range of injuries.

The Dispute Law established three independent levels for settling disputes: a Citizens' Complaint Referral Service and a Local Pollution Review Board, both at the local level, and a Central Dispute Coordination Committee, in Tokyo. The Complaint Referral Service, staffed by low-level officials in all prefectures and cities with a population of more than 100,000, is designed primarily to elicit citizens' grievances. The function of the Local Pollution Review Board is to settle minor disputes between private parties and between citizens and the government. Joint Prefectural Review Boards handle disputes that cross prefectural boundaries. The Central Dispute Coordination Committee deals with higher level issues involving major pollution cases, those between prefectures and those referred to it by the prefectures.

Three forms of extra-judicial dispute settlement are permitted under this law, mediation, conciliation and arbitration. The simplest and least formal procedure is mediation, which is usually conducted at the initiative of the parties to a dispute. In this procedure the main function of the mediator is as an intermediary, principally to expedite communication. The outcome is a binding document, a contract that precludes the parties' right to litigation regarding the dispute.

Conciliation is a more formal process that sometimes begins when mediation has failed, and in which a committee of conciliators participates more directly than do mediators in the mediation process. They often conduct on-site investigations and request documentary evidence. Conciliation committees are also empowered to draft a binding contract between the disputants, when they appear unable to reach an agreement among themselves. This contract is deemed as accepted by the parties unless they formally object within 30 days.

Although only infrequently used, the third authorized procedure is arbitration. This technique is more formal and relatively inflexible since the parties agreeing to arbitration are bound to accept the decision of the arbitrators.

One of the major hazards to Japanese coastal fisheries, particularly in the Inland Sea, has been the frequent occurrence of red tides, which have occasioned many fisheries disputes. Typical was the destruction of fisheries in Tokuyama Bay, Yamaguchi Prefecture, western Honshu, the location of a major petrochemical complex. This case will be used to demonstrate conflict resolution in inshore fisheries using the modernized conciliation process established by the Dispute Law.

In November, 1973 the fishermen of two FCAs in Tokuyama City, and who fished in Tokuyama Bay, requested the Central Pollution Investigation Committee to conciliate their dispute with 12 petro-chemical companies that operated near their fishing grounds. The fishermen alleged that these companies, through permitting sludgy effluents to accumulate in the bay, had caused the outbreak of red tides that had in turn damaged the fisheries.

Fundamental to the disposition of this case was a determination of the 12 companies' role in the pollution of the bay. Whereas the fishermen asserted that the specified companies were the culprits, the latter countered by claiming that there were many sources of the pollution of the bay waters in addition to their own discharge of effluents. These included runoff from agricultural lands as well as discharges from the city of Tokuyama itself. Thus the assignment of guilt to the 12 companies alone was untenable and therefore that the size of compensation payments demanded by the fishermen exceeded the companies' responsibility for pollution. An expert committee employed by the conciliators surveyed the site, with inconclusive results. As a consequence the committee was unable to explain either the cause of the red tides or the degree of responsibility of the 12 companies.

Although no exact, scientifically-based assignment of guilt could be established, there was an apparent link between the companies' polluting effluents and damage to the fishing grounds. To resolve the problem the conciliation committee, based on data it had assembled, calculated the monetary value of the fishermens' losses. Using that figure and the amount that the fishermen were already receiving in compensation from the companies, the committee established 200 million yen as fair compensation. The committee then persuaded both parties to accept this figure. The companies agreed to pay 75 percent of the total as compensation for damages to the fisheries and would contribute the balance to the establishment of a fisheries promotion fund, the use and administration of which would be controlled entirely by the complainants' FCAs.

Owing to the expense involved as well as to the need for

prior governmental consideration, the committee deemed it impractical for the companies to remove the accumulated sludge from the fishing grounds. Further, the terms of the conciliation did not require the companies to cease operations. However, it did require them to pledge to abide by existing pollution standards as well as to clean up their operations.

As Gresser et al. (1981) point out, this conciliation agreement raises an interesting legal issue, since for the fishermen to have been legally entitled either to have the sludge removed or to have the factories closed down they would have had to prove an infringement of property or other rights. But there was no definite proof that these rights had been infringed.

In general, the Dispute Law seems to have worked well, and the system of grievance counselors has been particularly effective. The two main reasons for its success are, firstly, that local people, such as fishermen, are familiar with the system and its procedures are simple, and secondly, that the counselors are accessible to the people, they can marshal scientific expertise and launch a meaningful investigation, and, being government officials, they can exert pressure on polluters.

Of the three extra-judicial procedures recognized by the law, conciliation is that most preferred. Partly this is because mediation has had a checkered history in the earlier pollution cases, particularly when proposed by politically motivated persons, such as prefectural governors, and partly because arbitration by government-appointed arbitrators is viewed as being potentially biased as well as pre-empting litigation. But more importantly conciliation provides a nicely balanced mix of both formality and informality. It is more forceful than mediation yet less summary than arbitration. Further, conciliators identify various options towards a solution, analyze with the disputants the cost and benefits of each, and encourage them to identify mutually satisfying solutions. They also usually refrain from imposing pre-conceived solutions.

Further, the Dispute Law has also redressed fundamental inequities inherent in the judicial process. Hitherto, polluters largely had a monopoly of information and could use their relatively vast financial resources and political connections to secure all manner of advantages compared with fishermen or FCAs. Conciliation teams, on the other hand, make their own independent investigations and also wield the clout of being government officials. An extremely important practical consideration is that the costs of litigation are enormously greater than those involved in conciliation.

The Importance of Compensation

As has already been demonstrated, the payment of monetary compensation has been traditionally employed to recompense Japanese fishing communities or individual fishermen for a reduction

in resources through competing fishing activities or for the loss of gear. This method has been continued in post-war times, when, in particular, it has been used to recompense for either a partial or total loss of rights, as well as injury, largely as the result of industrial or urban growth. Reinforcement of that traditional right to compensation may perhaps have been the single most important achievement of the post-war campaign against pollution.

In addition to its practical importance the social function of compensation payments must not be underestimated. Had traditional norms prevailed in the minamata case, and either industry or government adequately compensated the victims, the judiciary would have had no need to enter the affair.

The Inland Sea area of western Japan was selected to become one of the major post-war industrial bases of the nation. As a consequence conflict between competing resource users has been intense, and the total amount of money dispensed to FCAs in compensation for lost fisheries rights the highest in the nation. In the Shimotsui (Okayama Prefecture) area of the Inland Sea, studied by Befu in 1976 (Befu, 1980), reliance on compensation payments had become a way of life for local fishing communities, since they had been preoccupied with compensation negotiations for 25 years, and, given the character of environmental impacts within the region, were likely to be so well into the foreseeable future. During the period 1952-1976, Shimotsui fishermen had gone through 14 separate compensation settlements.

The first was in 1952, when for fear of over-fishing of sand eels, the Allied occupation authorities ordered the destruction of almost half the fishing boats registered to the Shimotsui FCA, along with their nets. That was the only case of compensation being paid to that community that did not result from destruction of fishing grounds owing to industrialization.

There followed a series of settlements associated with land reclamation projects for the Mizushima industrial complex. Six separate compensation agreements were negotiated between 1953 and 1976, as the complex was progressively expanded. Then in 1963 and 1970 fishermen were compensated for relinquishing fishing rights in areas where two deep water navigation channels were excavated. Three other settlements compensated them for rights lost owing to the development of a commercial anchorage in Mizushima Bay (1971), those owing to bridge construction (1976) and for damages suffered from an oil spill at the Mitsubishi Refinery in Mizushima (1975). The feverish industrial development activity that occurred around the Inland Sea during the 1950s and 1960s has now abated, but in such an intensively used industrial waterway the Shimotsui fishermen still anticipate compensation from continued water pollution as well as from accidental oil spills, ship collisions and the like.

As would be expected, compensation monies have augmented fishermens' incomes. But given the vast amounts of money paid by

government and industry, surprisingly little has been received by individual families. In Shimotsui, for example, $ 2.4 million was paid in 1953 for the reclamation of "Zone A" of the Mizushima industrial complex and again in 1961 for that of "Zone D". And in compensation for the Mitsubishi oil spill, an incredible $ 491 million was received in 1974. In terms of individual family income, however, the amounts received were only in the hundreds or few thousands of dollars, a mere fraction of a fishing family's average annual income.

In Shimotsui compensation has been a major factor in permitting investment in new boats and engines and modern gear, such expensive investments that would not have been possible from a fisherman's regular income, even with an FCA loan. In effect, then, industrialization has contributed to the decline of fisheries in the Inland Sea -- and also in similar water bodies -- in two ways: by the direct destruction of marine environments necessitated by land reclamation and other activities, and by pollution; and it has contributed indirectly through compensation that enabled fishermen to purchase modern equipment to fish more intensively in an environment already rendered fragile by degradation and habitat destruction.

Community Responses to the Disposition of Fishery Rights

Regardless of support from the general public, the defence of Japanese fishery rights and the coastal environment rests ultimately with the nation's fishing communities, since, if for no other reason, few other groups could claim the legal standing of fishermen, as required by Japanese court procedure. However, the response of fishing communities in this context has been far from uniform; some agreed unamimously to sell their entire rights, others have been divided in their opinion regarding partial or total sale, and in yet others the entire community has been steadfast in its refusal to sell.

Among the least desirable outcomes have been those where diametrically opposed views were held with equal tenacity by different factions within a single community. Inevitably, such an impasse has resulted in the fissioning of communities, sometimes permanently. It should be noted, however, that most fishing communities have found commercial development attractive, or at least not as unattractive as would have been a defence of their fishing grounds via judicial procedures. Since examples of the successful and unanimous defence of fishing rights have been given above, only examples of the first and last two types are provided here.

Not atypical of a small Japanese fishing community's response to industrial development is the Inland Sea village of Takashima, in Okayama Prefecture, first studied for 13 months in 1950-51 by Norbeck (Norbeck, 1954) and restudied 23 years later (Norbeck, 1978). In the intervening two decades Takashima village had been absorbed by the neighbouring metropolitan area, the island

on which it had stood had been linked to the mainland by reclaimed land on which an industrial estate had been built, and the waters to which fisheries rights were still held had become irredeemably polluted. Only 13 of the original fishermen still officially worked full-time at that occupation, and the men had each been awarded $ 47,000 in compensation for their lost fishery rights. Most former fishermen and many of their wives were now employees of a ship-building company and its local sub-contractors. In the intervening 23 years the original fishing community had become virtually urbanized.

Whereas anthropologist Norbeck was appalled on returning at what he considered to be a dismal panorama, the former fishermen and their families did not share his romantic notions:

> Almost no one wanted to return to conditions of the past.... Who today would want to do such things as gather firewood in the forest, use kerosene lamps, cultivate by hand tools the steep and poor soil of the abandoned kitchen gardens, eat despised barley mixed with rice, draw water from wells,and suffer unnecessarily from illness for lack of money and facilities for medical treatment? Children and adolescents had no knowledge of these matters except dimly by hearsay and looked upon them as unimaginable circumstances of a remote and primitive past (Norbeck 1978: 270).

Families that had received $47,000 in compensation money were "incredulous at their good fortune," since they could now afford such formerly out-of-reach luxuries as cars and household appliances. Further, one could now realistically contemplate a college education for one's children. Although some of the former villagers acknowledged the ugliness of their new urban environment, "... the ugliness and pain of past poverty could not be matched by any of the drawbacks of modern times" (Norbeck, 1978).

At the other extreme some fishing communities have withstood the financial inducements offered by industrial developers. One such community was Usuki, in Oita Prefecture, Kyushu. But in doing so it incurred severe social costs.

In 1969 the mayor of Usuki proposed that the city offer to the Osaka Cement Company a site for constructing a plant on land to be reclaimed near the fishing villages of Odomari and Kazanashi, which were incorporated into the city. The local FCA representing the villages agreed to sell the fishing rights to the site.

Odomari fishermen were relatively poor and not optimistic about their future in fishing since they took only low-value fish and worked on a share system as fishery employees. As such they were eager to sell their fishery rights for whatever compensation

they could obtain, particularly since many anticipated finding jobs either in the cement plant or its nearby affiliated quarry. But in neighbouring Kazanashi most fishing households were resolutely against both the presence of the cement company and the decision of their FCA to sell their rights. The older fishermen among these resisters wished to preserve their fishing rights in the bay. But the younger men of Kazanashi had a far different reason. They were distant water harpoon fishermen who caught valuable fish, and so earned high incomes. They were therefore relatively rich and immune to financial incentives. Their resistance to the development was based principally on the need to preserve the clean air against dust pollution, since their harpooning skill was highly dependent on good eyesight.

As a consequence, the village of Kazanashi was deeply divided:

> ... of its 176 households, 33 were in favor of Osaka Cement (sansei), and 143 were strongly against it (hantai). Murahachibu -- traditional ostracism -- began to appear in February 1970. The hantai and sansei families became two separate hamlets, with separate arrangements for sanitation, garbage collection, public safety, and fire and police protection, and separate neighborhood associations, PTA, and women's groups. There was absolutely no interpersonal communication between the two sides. (McKean, 1981: 85).

Disgruntled fishermen from Kazanashi finally filed suit in the Oita District Court, based on doubts about the validity of the FCA's decision to sell their rights and their belief that many who had agreed to sell their rights had been bribed. Further, their lawyers thought firstly that the law could be interpreted to require a unanimous decision to sell the fishing rights of any individual members, and secondly -- and most important, as it turned out -- that any decision by the FCA which deprived some members of their livelihood rights was unconstitutional. The court's verdict supported the plaintiff's arguments entirely. Fishing rights were declared to be a property protected by article 29 of the Constitution, which nobody could "buy" without the owner's consent. This therefore meant that a unanimous agreement to sell fishing rights to a private company would be required, and thus the two-thirds consent rule of the FCAs was held to be unconstitutional (McKean, 1981).

To a large degree, as demonstrated by Befu (1980), many socially negative attributes of financial compensation derive essentially from the negotiation process between the fishermens' representatives and the government, as well as from the basis on which the amount of compensation is calculated. No objective measure is used to calculate the income that would be lost owing to a particular development, although such a figure is fundamental to calculating the amount of compensation to be paid. In-

stead, compensation rates are based on a formula that includes average annual fish landings of the unit to be compensated, fish prices, net profit, estimated percentage of total income that would be lost owing to the development, and the number of years to be compensated.

That lack of a precise figure for compensation provides scope to manoeuvre during the course of negotiation. This fuzziness is exacerbated since only the representatives of either the government or industry know the budget allocated for compensation in a particular case, and this information is withheld from the fishermens' side. This situation tends to sour the atmosphere in a fishing community since both the fishermens' representatives and those of the government and industry are alleged to use slush funds to induce the acceptance of otherwise unacceptable figures (Befu, 1980).

Not uncommonly land reclamation projects and the like extend beyond the sea rights boundaries of a single FCA. Under those circumstances it is not unusual for the government or industry side to negotiate with each FCA separately. As a consequence, the amount of compensation, for precisely the same losses, is likely to vary considerably among the FCAs, depending on the acumen of and the tactics employed by their representatives. To preclude a united front among a group of FCAs the representatives of any one Association are forbidden to reveal to the others the amount of compensation awarded until negotiations have been concluded with all FCAs. Thus in the area studied by Befu, "a consequence of separate negotiation has been to increase suspicion, schism, and hostility among cooperatives and among fishermen of different cooperatives."

Befu also reports that some cooperatives are alleged to inflate their membership lists to include unqualified members, and thereby to obtain a higher level of compensation. After negotiations have been completed much of that money "... is said to be pocketed by the cooperatives' leaders, sometimes justified as reimbursement for personal expenditures for negotiation ... the remainder then is distributed to the members, thus making them a party to the crime and mollifying their discontent."

Whether some leaders of fisheries cooperatives do benefit financially in such illegal ways, or whether it is just jealous and malicious gossip is immaterial, since invariably under such circumstances the atmosphere in the community is poisoned by the entire process. What is more apparant, however, is that the better community leaders and negotiators profit politically from their activities. Commonly, the leaders of a fishing community are competing for local political power and they use the presidency of the local FCA as a stepping stone to larger political office. One way to secure election to the presidency of an FCA is to reveal the potential or to actually demonstrate skill as a negotiator. Successfully negotiated compensation settlements demonstrate a man's capabilities to protect local interests, as well as his power and influence.

In modern Japanese coastal fisheries traditional perceptions of justice and processes of resolution continue to play a dominant role in the formal management of conflict, just as they do in its informal management. As has been demonstrated in this chapter, failure to properly consider these traditions has been either a major cause of considerable problems or of the inability to resolve festering conflicts. To a large degree traditional informal and formal methods of conflict management utilize the same methods: mediation, conciliation, arbitration, the use of go-betweens, protracted face-to-face contact and the payment of compensation, that result in concession, counter-concession and compromise to reach a mutually acceptable solution. Although in these last 20 years the judiciary has entered the process in a relatively minor yet important way, it is noteworthy that these traditional methods of dispute management have been modernized via the Dispute Law.

Paradoxically, one of the major causes of fisheries incidents has been institutional reform. In effect this was the underlying cause of the Kyuroku-to, Ariake Sea and Essa Strait incidents.

The unilateral declaration of ownership to hitherto unregistered reefs and islets has often caused major incidents by changing and obscuring traditional patterns in the jurisdictions of surrounding waters, thereby leading to strong objections from other traditionally common users. This problem is typified by the Kyuroku-to incident, where resources-rich waters were unilaterally grabbed by one prefecture, taking advantage of an opportunity provided by nationwide fisheries administrative reform, and totally ignoring customary usage. Neglecting to accommodate the strong precedents established by a long history of customary usage has been one of the major problems resulting from reform decisions made under both Japanese fisheries laws. Under the Japanese system of administration, when local governments and Joint Mediation Commissions cannot solve their problems, the Ministry steps in to mediate. But the Ministry is not always successful either, in which case the national cabinet intervenes and imposes a solution, usually either via the passage of new legislation or via revisions or amendments to existing laws.

Although clarification of the jurisdiction over coastal fishing grounds may be important in developing a fisheries management plan, it is often followed by the establishment of new boundaries and limited entry restrictions that demand the payment of entry fees for fishing and place limitations on the conditions of the fishery. In this process it is evident that historical precedents must weigh heavily and that any decisions must be both a compromise and flexible.

In addition, reform itself is a cause of conflict since it changes traditional patterns to forms that are administratively more efficient, and, in the case of the Fisheries Law of 1949, more equitable. In the Ariake Sea incident between Saga and Fukuoka prefectures, for example, the fishermen of Saga Prefec-

ture believed that after the resolution in 1908 of the conflicts that followed the reforms of the 1901 Fisheries Law, order had been maintained for four decades. They saw no need to alter that conflict-free relationship. But, on the other hand, those of Fukuoka Prefecture considered themselves to have been exploited during those forty years, and, based on the equitability clauses in the new 1949 Fisheries Law, sought to redress the situation. The Essa Strait case provides another example of the same problem, since according to the 1949 Fisheries Law, coastal fisheries were to be developed rationally. The modernized trawlermen of Niigata Prefecture perceived this as giving them a mandate to operate within the formerly closed inshore fisheries rights area, whereas the traditional fishermen, who wished to preserve their exclusive rights, vigorously rejected their claim.

Those incidents highlight a fundamental principle in Japanese behaviour, viz. general principles such as are codified into law must be applied flexibly and according to local conditions. Further, in all such instances, protracted and open discussion to achieve a mutually acceptable concensus, which invariably involves compromise by both parties is essential. When this basic process is ignored conflicts invariably become entrenched and solution is impossible.

Similarly the use of compensation payments for loss of rights is deeply embedded in Japanese coastal fisheries tradition. With the modernization of the nation this tradition has been extended to inter-sectoral conflicts involving fisheries. In the complex, multiple use environments such as those in which a great many Japanese coastal fisheries now operate, compensation inevitably represents the only realistic way in which damage to or loss of fishing rights can be recompensed. Short of completely banning all damage to and infringement on fishing rights by other potential users of resources and space in the coastal zone -- which is obviously not a realistic option -- there is no way to avoid a degree of environmental disruption that has impact on coastal fisheries. Equally clear, however, is that some sources of environmental perturbation that are detrimental to fisheries and ultimately to human consumers, such as toxic chemical effluents, must be prevented from entering coastal waters. These must be distinguished from others, such as land reclamation, that can be permitted if those who are thereby deprived of resource use rights are paid for their loss.

Even if a nationwide plan for the coastal zone were adopted to replace the present ad hoc approach, and blended with the concept of the local control of local marine resources, fishing rights in some locations would inevitably still be compromised. Under these circumstances compensation payments would remain the only feasible means of managing conflicts among incompatible coastal resource uses. It is thus important to understand how compensation has been used in contemporary Japan to manage local fishery resources, as well as the responses of communities to such payments, particularly in terms of their ability to effectively manage their fisheries rights in the face of the internal

and external pressures induced.

In examining a variety of communities' decisions on the disposal of their fishing rights a number of common factors emerge that might permit prediction of likely decisions in the Japanese case. Foremost among these is a fishing community's sense of purpose. Where an entire community has retained a strong identity, sense of purpose and pride in fishing, and where that pursuit continues to yield an economic rate of return that is locally perceived of as good, or at least acceptable, compared with alternative means of making a living, it is probable that fishing rights would be strenuously defended against private developers. On the other hand in fishing communities characterized by sharp economic stratification, and therefore by a relatively poorer and less economically satisfied group, or where economic rates of return have been severely curtailed by the environmental impact of nearby land or resource uses, fishing rights might not be so strenuously defended by the majority. In the more extreme cases, as at Takashima, in the Inland Sea, there might be precious little left to defend anyway, and economic alternatives might prove a further disincentive. There are also other, more obvious factors involved. In particular these are a community's financial ability to launch and sustain a defence of its rights, the educational level of its members, the quality of community leadership, and levels of contact with outsiders who could lend strength and resources to the defence.

CONCLUSION

Based on deep historical roots, Japanese fishermen enjoy legally-guaranteed equitable access to and "ownership" of the living aquatic resources in coastal waters. Further, no conceptual distinction exists in Japan between land holdings and land tenure and sea holdings and sea tenure, since fisheries rights have a legal status equal to that of land ownership.

According to the Fisheries Law (1949) fisheries rights in the sea area under the jurisdiction of a Fisheries Cooperative Association (FCA) are the bona fide personal property of the individual members of that Association, to whom they are distibution by the Association. Each FCA establishes regulations for the control and operation of various types of fishery in an equitable, efficient and sustained manner, as local conditions dictate. This situation has its origins in both customary law and in the formal legislation of the Japanese feudal era, although democratic processes and equitable treatment had to await the sweeping institutional reforms that followed World War II.

As this study has demonstrated, sea tenure in Japanese coastal waters is a complex subject. It represents a continuity of tradition and involves time-honoured customary procedures that have, after suitable modification, been gradually incorporated into modern legislation. It operates at various levels, ranging from the national government, through the prefecture and the local FCA, to the fishing squad and finally to the individual fisherman.

In present day Japan the FCA is a vitally important intermediate organization that links the central and prefectural governments with the individual fisherman. Although comprising the fundamental unit of governmental fisheries administration and being the key organization for the implementation of official fisheries projects, an FCA belongs entirely to the local community of fishermen. The FCA lies at the hub of modern Japanese fishing communities, in which it constitutes the focus of social and economic activities. But, as throughout modern history, its principal function remains the planning, management and continuing sustained development of the local sea territory to which a community has tenure.

Although "incipient FCAs" existed during the feudal era and were more fully formed by the 1901 Fisheries Law, they were essentially controlled by village middlemen and other dominant

personalities. Yet in so many ways the modern Japanese FCA is really only an elaborate variant of the traditional fishing village organization that has persisted since feudal times, and maybe even earlier. The beneficial aspects of traditional village institutions were not abandoned during the modernization of Japan. Instead, they were transferred to Fishery Associations and later to Fishery Cooperative Associations. Thus the organization and administration of modern Japanese coastal fisheries owes much to the continuance of an entity developed during feudal times.

What emerges in summarizing the situation over the past eight decades since the implementation of the 1901 Fisheries Law is that, apart from modernization, little fundamental change has occurred within the local fisheries organizations. Present day regulations pertaining to entry rights and fishing grounds remain essentially the same as those of the Edo Period, as, in many areas, do those regarding size limitations and seasonal regulations on the species taken. In reality, too, the tenured territories of the local FCAs have varied little, apart from a trend towards aggregation under consolidated FCAs, as have traditional concepts of the entry rights of outside fishermen. Overall the major trend discernible in coastal fisheries has been one of institutional simplification together with a reduction of the former proliferation of institutions and administrative procedures.

It may appear initially as if the Japanese coastal fisherman is strictly bound by many detailed rules and regulations handed down through a rigidly hierarchical structure from the Ministry of Agriculture, Forestry and Fisheries, via the prefectural Fisheries Office to the FCA, which finally issues them to the individual fisherman and ensures their enforcement. But this is deceptive. An analysis of the documents issued in support of regulations, such as the "Exclusive Fisheries Rights Documents," issued to each FCA, for example, reveals an ambiguity and generality of language, characteristics that lend to the documents, which limit themselves virtually to a simple statement of basic principles and fundamental rules of behaviour, a wide latitude for interpretation. In general, the rules and regulations permit flexibility, on a characteristically Japanese case-by-case basis, as suited to the specific requirements of each FCA.

Detailed application of basic ministerial or prefectural guidelines is left entirely to the FCA -- in which every fisherman is ensured a voice -- and in many instances to the specialized fishery squad. Thus within a framework of basic policy guidelines decided at the two higher levels, the planning, management and monitoring of coastal fisheries rests essentially in the hands of the day-to-day operators. The FCA is at the core of the regulatory process and can adapt its implementation or execution rules and regulations to the local needs and conditions of specific fisheries, based on the empirical information provided either directly by the fishermen or indirectly by their fishing behaviour and performance. Again, this is a tradition continued from the feudal period, during which time fief-level officials

limited their interventions to major factors of concern to the fief and left the everyday decisions and operations firmly in village hands.

The local administration of Japanese coastal fisheries is a complex, highly structured yet locally-controlled system that, as has been demonstrated, evolved from deeply engrained customary village procedures. Within the overall framework of the formal regulations exists an unwritten community customary law that, more firmly than official rules and regulations, governs fishermen's behaviour according to local norms. First-comer's rights to a particular fishing spot, skill, knowledge and secrecy, pride of workmanship and community pressure to conform, all serve to balance excessive competitiveness and to ensure that all but the most intractable conflicts are resolved by informal mechanisms. Local community perceptions of social and "owned" space are one of the keys to understanding the territorial and tenurial behaviour of Japanese coastal fishermen, since community norms are flouted at one's peril and the threat of social banishment is real and horrifying. On the other hand, the anonymous prefectural regulations, and even more those established by the remote Ministry, are generally regarded as less binding.

One characteristic of Japanese society in general is that people heed closely the opinions and criticisms of their fellow community members, somewhat less closely those of the neighbouring community, and only nominally those of the larger society. Japanese rural communities, and no less those of the fishermen among them, may well be characterized as inward looking and parochial in their behaviour. This fundamental characteristic seems to have been thoroughly appreciated by those who framed fisheries legislation, since they enacted the basic structure but left the details and implementation firmly under community control.

In those terms most contemporary problems in Japanese coastal fisheries, such as environmental degradation, pressures from other economic sectors and the like, can be interpreted as a resounding clash between local and non-local perceptions and norms of behaviour. Paradoxically, the very strength and continuity of the tradition of parochiality is a major drawback in present day Japanese coastal zone planning. So strong are his rights, in fact, that the coastal fisherman has a major impact on other forms of coastal zone resource use. Whereas by invoking eminent domain and on payment of compensation the government can expropriate fishing grounds for, say, reclamation and industrial development, a private developer is faced with a different situation. Prior to initiating any project he must purchase all the rights that would be lost as a consequence of the development, or compensate for any reduction in the quality of the rights, or a combination of both. But if the fishermen refuse to relinquish their rights there is nothing to be done about it, since not even the central government is permitted to intervene when an FCA is resolutely opposed to such a transaction. But big money is persuasive and vast sums have been paid to compensate FCAs for their

rights, often under dubious circumstances. Whereas most fishing communities seem to have solved such problems amicably, some have suffered as a consequence of conflicting opinions regarding the disposition of their fisheries rights.

Paralleling the continuity of tradition in coastal fisheries management is the persistence of time-honoured processes and techniques of conflict management and resolution. This is as equally true of intra-community conflict as for those at higher levels. It is noteworthy that since the inception of Japan's modernization drive, at the beginning of the Meiji Era, the central government and judiciary have played only insignificant roles in resolving inter-sectoral clashes. Rather, conflicts were resolved either by local authorities or by the contending parties themselves, employing such traditional devices as mediation, conciliation and arbitration. Even many serious disputes were mollified by privately negotiated indemnity contracts. The usual process of settling a dispute was for an initial negotiation to be followed by a confrontation between angry fishermen and the polluter, and finally by an offer of compensation by the latter. Typically, such a process would be repeated until a particular controversy was finally settled. On the other hand, where such techniques and processes have been ignored conflicts commonly become bitter, deeply entrenched and difficult if not impossible to solve. This was particularly apparent in some of the major conflicts between industry and fishing communities. It is also noteworthy that the Dispute Law was based essentially on the modern application of these traditional techniques of conflict resolution. The payment of compensation monies is a time-honoured means used in Japan to recompense the legitimate claims of the aggrieved party. Nevertheless, in particularly intractible cases the judiciary played an important role, and the post-war development of legal safeguards for coastal fisheries is inseparable from the evolution of Japanese environmental legislation, stemming as they do from three generations of court cases to compensate for rights lost through pollution and other causes.

Despite its problems the Japanese system of coastal sea tenure, which ensures intra-village cooperation and reasonably equitable access to resources, is unparalleled throughout the world. It stands in striking contrast to conditions in most other countries, be it the impoverishment of most other Asian fishermen or the unmitigated chaos that reigns in U.S. coastal waters. But given its unique history, long genesis, social contexts, merits and demerits, which certainly make the Japanese system intellectually fascinating as well as stimulating to fisheries administrators in other countries, there remains the challenge of evaluating it for transfer to other socio-economic contexts. Whereas evaluation and the design of plans based upon it are probably not beyond our capacities, implementation in other socio-political contexts might well be.

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